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VOL. XXII., PART I., No. 1101 } JOHANNESBURG, TRANSVAAL, SATURDAY, NOV. 2, 1912. [WEEKLY, PRICE 6D.

Professional Directory.

The Knights Deep, Limited.

(Incorporated in the Transvaal).

REPORT OF THE DIRECTORS

For the Year ended 31st July, 1912.

Submitted at the Fourteenth Ordinary General Meeting of Shareholders, held in the Board Room, Consolidated Gold Fields Buildings, Simmonds Street, Johannesburg, on Friday, 25th October, 1912, at 11 o'clock in the forenoon.

Gentlemen,

Your Directors beg to submit their Report, together with the audited Accounts, for the year ended 31st July, 1912.

CAPITAL.

The Capital of your Company remains at £650,000, in 650,000 shares of £1 each, of which 643,526 shares have been issued fully paid, leaving 6,474 shares held in reserve.

DEBENTURES.

Your Debenture debt was further reduced during the year by the redemption of £23,500 Debentures, leaving £94,100 Debentures still to be redeemed.

PROPERTY.

The area of your Property is unchanged, and comprises 180·712 claims on the farm Elandsfontein No. 12, in the Mining District of Boksburg.

INVESTMENTS.

Your Investments, which stood in the books at £31,272 2s. 5d. on 31st July, 1911, now stand at £33,631 11s. 4d., or a reduction of £640 11s. 1d., which is accounted for as follows:—

Reduction of Interest in the Consolidated Gold Fields Native Labour Organisation	£723 7 1
Less 207 shares (8s. paid) acquired during the year in the Witwatersrand Co-operative Smelting Works, Limited ..	82 16 0
	£640 11 1

You also hold 11,111 fully paid shares of £1 each of the Breyten Collieries, Limited, which have been earmarked as an Investment for the purposes of the Additions and Renewals Fund.

OPERATIONS.

Particulars of the operations conducted at your Mine during the year are contained in the attached Reports of the Acting Superintending Engineer and Manager.

ACCOUNTS.

It will be observed from the Working Expenditure and Revenue Account that the profit on working during the year, after allowing for the expenditure of £11,075 12s. 5d. on Renewals and Replacements of Machinery and Plant, amounted to £216,164 18 11

Add Sundry Revenue 8,365 7 11

£221,830 6 10

Less Amount written off for depreciation of Live Stock, Vehicles and Furniture	£208 1 0	
Profits Tax—amount estimated to be paid for year to 31st July, 1912, less amount over-estimated for last year ...	15,652 18 0	
Debenture Interest and Expenses for the year ...	7,138 10 0	
		22,999 9 0
leaving a net profit for the year of		£201,830 17 10
Add Balance at credit of Appropriation Account at 31st July, 1911 ...	£83,432 13 8	
Amount at credit of Excess Development Account now transferred to credit of Appropriation Account	1,754 5 4	
		85,186 19 0
		£287,017 16 10
Less Dividend No. 13 of 15 per cent., and Dividend No. 14 of 12½ per cent. declared during the year	£176,969 13 0	
Revenue appropriated for redemption of Debentures	23,500 0 0	
Amount credited to Additions and Renewals Fund, less amount expended during the year and charged to Working Expenditure and Revenue Account	3,621 6 11	
		204,090 19 11
Balance at credit of Appropriation Account at 31st July, 1912		£82,926 16 11

The Knights Deep, Limited—continued.

DIRECTORATE.

In terms of the Articles of Association, Messrs. E. A. Wallers and D. Christopherson retire from the Board, but, being eligible, offer themselves for re-election.

AUDITORS.

Mr. Charles Stuart, Chartered Accountant, was appointed one of your Auditors, in place of the firm of Messrs. Ball & Stuart, who have dissolved partnership.

You are asked to fix the remuneration for the past year's audit, and to elect two Auditors in the places of Messrs. Thomas Douglas and Charles Stuart, who retire, but are eligible, and offer themselves for re-election.

GENERAL.

Destruction of Crusher Station.—As mentioned in the Report for the quarter ended 31st July, 1912, a fire occurred on 12th August last, by which the Crusher Station of the Knights Deep-Simmer East Joint Plant was completely destroyed.

The damaged Plant was fully insured, and your Company has filed a claim for the loss sustained, while, in addition, it has lodged a claim under its Consequential Loss Policies. Fortunately, however, since the new Crusher Station, then in course of erection by your Company, was nearly completed, the delay to operations was not so serious as it might otherwise have been.

Management.—Mr. G. A. Chalkley continued to act as your Manager during the year, and your Directors desire to record their appreciation of the good services rendered by him during that period.

F. D. P. CHAPLIN (Chairman),
E. A. WALLERS,
Directors.

THE CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA, LTD.,
Secretaries.
per J. D. LOW.

Johannesburg,
8th October, 1912.

Dr. Working Expenditure & Revenue Account for the year ended 31st July, 1912 Cr.

To Mining Expenses			£238,026	0	7	
,, Development Expenses £5,290 4 8						
Less—Written off Excess Development	5,290	4 8				
Sorting, Crushing and Transport of Quartz			21,583	19	1	
,, Milling Expenses			40,265	10	0	
Tube Milling Expenses			18,999	4	3	
,, Sand Expenses			28,443	1	9	
,, Slime Expenses			15,495	10	11	
,, General Charges			31,430	2	3	
,, Hire of Plant			4,200	0	0	
					£404,413	8 10
,, Expenditure on Renewals and Replacements of Machinery and Plant					11,075	12 5
,, Balance, being Working Profit carried down					216,464	18 11
					£634,984	0 2
To Amounts written off for depreciation of Live Stock, Vehicles and Furniture, *less* Sundry Credits					£208	1 0
,, Profits Tax—						
Provision for the year ended 31st July, 1912			15,678	2	0	
Less—Overestimated for the year ended 31st July, 1911			25	4	0	
					15,652	18 0
,, Debenture Interest, including Guarantors' Remuneration and Trustees' Fees for the year ended 31st July, 1912					7,138	10 0
,, Balance carried to Appropriation Account					201,830	17 10
					£221,830	6 10

By Gold Recovered			£631,127	15	2	
Add—Rebate of Freight on Gold Bars			856	5	0	
					£634,984	0 2
					£634,984	0 2
By Balance brought down					£216,464	18 11
,, Sale of Water *less* Water Disposal Expenses and Purchases			586	6	0	
,, Rents, *less* Maintenance of Dwellings			1,103	9	6	
,, Interest, Commission & Exchange			3,373	5	1	
,, Sundry Revenue, including Dividends on Investments			3,302	7	4	
					8,365	7 11
					£224,830	6 10

Dr. Appropriation Account. Cr.

To Revenue Appropriated for Redemption of Debentures—						
Amount appropriated for Redemption of Debentures during the year					£23,500	0 0
,, Dividends—						
Dividend No. 13 of 15 per cent., declared 12th December, 1911			£96,528	18	0	
Dividend No. 14 of 12½ per cent., declared 18th June, 1912			80,440	15	0	
					176,969	13 0
Fund for Additions to and Renewals of Machinery, Plant and Buildings, amount equal to 10 per cent of Dividends Nos. 13 and 14			17,696	19	1	
Deduct—Amount spent during year and charged to Working Expenditure and Revenue Account			14,075	12	5	
					3,621	6 11
,, Balance carried to Balance Sheet					82,926	16 11
					£287,017	16 10

By Balance at 31st July, 1911					£83,432	13 8
,, Excess Development—						
Balance at 13st July, 1911			£7,044	10	0	
Less—Development Expenses for the year			5,290	4	8	
					1,754	5 4
,, Balance from Working Expenditure and Revenue Account for the year ended 31st July, 1912					201,830	17 10
					£287,017	16 10

The Knights Deep, Limited—continued.

Balance Sheet at 31st July, 1912.

Dr.

To Capital—						
Authorised—						
650,000 Shares of £1 each			£650,000	0	0	
Less held in Reserve, 6,474 Shares of £1 each			6,474	0	0	
						£643,526 0 0
,, 5½ per cent. Debentures issue at par			400,000	0	0	
Less purchased and redeemed to date			305,900	0	0	
						94,100 0 0
,, Reserve Account—						
Amount as per Balance Sheet at 31st July, 1911						194,471 16 4
,, Revenue Appropriation for Redemption of Debentures and Capital Expenditure —						
Amount as per Balance Sheet at 31st July, 1911			256,848	5	11	
Add—Amount appropriated during the year for Redemption of Debentures	£23,500	0 0				
Add—Amount appropriated during year for Capital Expenditure	12,671	7 1				
			36,171	7	1	
						293,019 13 0
						1,225,117 9 4
,, Fund for Additions to and Renewals of Machinery, Plant and Buildings—						
Balance at 31st July, 1911			38,101	16	9	
Add—Amount appropriated during year	£17,696	19 1				
Less—Charged to Working Expenditure and Revenue Account	14,075	12 5				
			3,621	6	11	
			42,026	3	8	
Less Amount written off for Additions during year as above			12,671	7	1	
						29,354 16 7
,, Sundry Creditors—						
Shareholders' Dividend Account, No. 14, of 12½ per cent.			80,440	15	0	
Debenture Interest accrued for July, 1912			131	5	10	
Government of the Union of South Africa—Provision for Profits Tax			15,678	2	0	
Open Accounts, including Wages, Stores and Sundries			46,930	1	9	
						143,180 4 7
,, Dividends and Debenture Interest Unclaimed, including Debenture Bonds drawn for payment, not yet presented, with interest accrued (per contra)						489 15 10
,, Balance from Appropriation Account						82,926 16 11
Contingent Liabilities—						
8s. per share unpaid on 753 shares of £1 each of the W.N.L.A. Ltd.			301	4	0	
12s. per share unpaid on 1,886 shares of £1 each of the Witwatersrand Co-operative Smelting Works, Ltd.			1,131	12	0	
On Uncompleted Contracts for Machinery, Plant, etc.			6,327	11	10	
			£7,760	10	10	
						£1,481,369 3 3

Cr.

By Property at Cost—						
180.712 Claims, Farm Driefontein No. 12, as per Balance Sheet at 31st July, 1911						£281,682 0 0
,, Expenditure on Equipment of Property, less Sundry Amounts written off—						
Shafts—Sinking			£233,475	13	6	
Shafts—Surface Plant			151,868	15	9	
Underground Plant			103,533	13	11	
Electric Power and Lighting Plant			18,144	11	3	
Workshops & General Buildings			85,479	19	11	
Water and Fire Service			5,363	13	8	
Joint Ore Reduction Plant			324,006	5	9	
Roads and Surface Improvements			1,755	4	9	
Rock Drill Plant			2,166	2	5	
Electric Coal and Ore Haulage Plant			14,126	13	8	
Water Purification Plant			2,084	9	5	
Water Disposal Plant			460	10	9	
Water Cooling Arrangements			889	11	7	
Metallurgical Laboratory (Interest in)			80	0	0	
						945,155 9 4
						1,226,117 9 4
,, Live Stock and Vehicles						392 10 7
,, Furniture						641 17 8
,, Stores and Materials on hand, including Machinery for sale						27,797 12 1
,, Investments and Interests in Other Concerns (at or under cost)—						
34,017 Preference Shares of £1 each in Victoria Falls and Transvaal Power Co., Ltd., fully paid						
7,875 Ordinary Shares of £1 each in Victoria Falls and Transvaal Power Co., Ltd., fully paid			32,719	10	5	
753 Shares of £1 each in Witwatersrand Native Labour Association, Ltd., 12s. paid						
1,886 Shares of £1 each in Witwatersrand Co-operative Smelting Works, Ltd., 8s. paid						
Interest in the Consolidated Gold Fields of S.A., Ltd., Native Labour Organisation			882	0	11	
						33,651 11 4
,, Investment of Reserve Fund for Additions to and Renewals of Machinery, Plant & Buildings— 11,114 Breyten Collieries, Ltd., Shares of £1 each, fully paid						14,286 18 8
Payments in Advance—						
Native Labour Recruiting Expenses			3,026	19	1	
Advances on account of Mechanical Engineer's Orders			6,585	18	3	
Licences, Taxes and Sundries			651	11	8	
Expenditure on Flottmann Drills			1,273	12	9	
						11,538 2 9
,, Sundry Debtors						9,168 18 2
,, Gold in Transit						21,490 8 2
,, Cash at Bankers, London and Johannesburg—For Dividends and Debenture Interest Unclaimed, including Provision for unpaid Debenture Bonds drawn for Payment with accrued interest (per contra)						489 15 10
,, Loan against Security						9,500 0 0
,, Cash—						
On Fixed Deposit			10,000	0	0	
At Bankers, Johannesburg London and Germiston			22,411	0	7	
						32,411 0 7
						£1,481,369 3 3

THE CONSOLIDATED GOLD FIELDS OF S.A., LTD, Secretaries.
per J. D. LOW.

F. D. P. CHAPLIN Chairman
E. A. WALLERS Director

To the Shareholders of
THE KNIGHTS DEEP, LIMITED.

REPORT.

We report that we have examined the above Balance Sheet with the Books and Vouchers of the Company in Johannesburg for the year ended 31st July, 1912, in which have been incorporated the Audited Accounts received from London and have obtained all the information and explanations we have required as Auditors. In our opinion such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us, and as shown by the Books of the Company in Johannesburg.

THOS. DOUGLAS
(Chartered Accountant)
CHAS. STUART
(Chartered Accountants, Auditors.

Johannesburg, 4th October, 1912.

"THE JUMPERS" GOLD MINING CO., LTD.

(Incorporated in the Transvaal).

DIRECTORS' REPORT.

For the Year ended 31st July, 1912.

Submitted at the Twenty-third Ordinary Annual General Meeting of Shareholders held in the Board Room, Exploration Buildings, Johannesburg, on Tuesday, the 29th October, 1912, at 12 noon.

To the Shareholders.

Gentlemen,—Your Directors have pleasure in submitting for your consideration their Report, together with the Report of the General Manager and the Financial Statements, for the year ended 31st July, 1912.

PROPERTY.

No change took place during the year under this heading.

ACCOUNTS.

The Accounts show a net working profit for the year (after deduction of the Treasury Gold Mines, Limited's, share of profits) of	£13,753	16	5
To which must be added :—			
Dividends on Shareholdings and Rebate on Gold Freights	292	13	5
Recovered on account of Mining Participations previously written off	21	11	5
Unappropriated Balance as at 31st July, 1911	8,440	0	5
Or a total available amount of	£22,508	1	8
which has been utilised as follows :—			
Set aside as a Reserve Fund, in terms of the Agreement with the Treasury Gold Mines, Ltd.	£4,377	19	4
Written off Mining Participations	125	12	11
Appropriated on account of Loan to the Benoni Consolidated Gold Mines, Ltd.	7,934	8	9
Profits Tax	1,622	16	0
	£14,060	17	0
Leaving a Balance to credit of Appropriation Account of	8,447	4	8
	£22,508	1	8

which has been carried forward.

The amount of the loan to the Benoni Company was £8,333 6s. 8d., the difference between this sum and the £7,934 8s. 9d. referred to above being accounted for as to £273 5s. by the sale of equipment and as to £125 12s. 11d. by the utilisation of an amount written off in respect of an expenditure incurred in 1911 on Mining Participations, as detailed in the Balance Sheet.

EQUIPMENT EXPENDITURE.

There was no expenditure on equipment during the year under review.

BENONI CONSOLIDATED GOLD MINES, LIMITED.

Shareholders were advised on 19th February, 1912, that, in view of the financial position of the Benoni Consolidated Gold Mines, Limited (in which your Company is so largely interested), it became imperative for your Company to join two financial firms interested in a loan to the Benoni Company of £25,000, which was raised for the purpose of enabling that Company to reach the crushing stage and to meet its liabilities on capital account. The loan bears interest at the rate of 6½ per cent. per annum.

The regrettable position in which the Benoni Company finds itself to-day has been fully explained to Shareholders of this Company by the issue to them of the Reports and Accounts of the Benoni Consolidated Gold Mines, Limited, for the year ended 31st December, 1911, and of the Report of the Proceedings at the General Meeting of the Shareholders of that Company held on 4th July, 1912.

INVESTMENTS.

No change took place during the year under this heading. Your investments as at 31st July, 1912, therefore consisted of :—

102,700 £1 shares Benoni Consolidated Gold Mines, Limited;
45 £1 shares Geldenhuis Deep, Limited;
290 £1 shares Witwatersrand Native Labour Association, Limited (12s. per share paid); and
118 £10 shares Rand Mutual Assurance Company, Limited.

OPERATIONS AT THE MINE.

The attached Report of the General Manager contains full particulars of the result of mining operations during the year under review.

AGREEMENT WITH THE TREASURY GOLD MINES, LIMITED.

As will be seen from the Accounts, the profit from joint working operations amounted to	£20,902	1	0
Out of which the sum of	7,148	4	7
Was handed over to the Treasury Gold Mines, Limited, in settlement of their share of the profit, leaving a balance in favour of this Company of	£13,753	16	5
From which, however, must be deducted a sum of	4,377	19	4
Set aside as a Reserve Fund, so that the net amount available by this Company was the sum of	£9,375	17	1

"The Jumpers" Gold Mining Company, Limited continued.

DIVIDENDS.

No dividend was declared during the year under review. On the other hand, a Dividend (No. 27 of 5 per cent.) was declared by the Board on 1st October, 1912. The dividend is payable to Shareholders registered in the Books of the Company on 22nd October, 1912.

DIRECTORATE.

Mr. E. J. Renand was appointed during the year to a vacant seat on the Board. You will be asked to confirm this appointment.

The retiring Directors are Messrs. S. C. Black and E. Friedlander, both of whom are eligible and offer themselves for re-election.

AUDITORS.

You will be requested to fix the remuneration of the retiring Auditors, Messrs. W. J. Dold and J. P. Ablett, and to elect Auditors for the ensuing year.

H. O'K. WEBBER, Chairman and Managing Director
S. C. BLACK,
W. T. GRAHAM,
H. P. ROGERS,
F. ELKAN,
F. DE FERRIERES,
E. J. RENAUD,
Directors.

Johannesburg, 8th October, 1912.

Dr. Balance Sheet as at 31st July, 1912. Cr.

To Capital Account			£100,000	0	0	
,, Funds Transferred from Appropriation Account			109,933	1	3	
Amount Appropriated as at 31st July, 1911	£101,998	12 6				
Amount Appropriated during Year	7,934	8 9				
			£209,933	1	3	
,, Sundry Creditors	£16,102	5 5				
On account of Unclaimed Dividends, Wages, Stores, Profits Tax, etc.						
,, Reserve Gold Account	2,463	6 8				
,, Reserve Fund	8,196	5 3				
Set aside in terms of Agreement with Treasury Gold Mines, Ltd., with accrued interest.						
,, Balance of Appropriation Account	8,447	4 8				
Unappropriated.			35,209	2	0	
,, Contingent Liabilities—						
For Shares subscribed for in other Companies:						
Witwatersrand Native Labour Association, Limited: 8s. per share uncalled on 290 shares	£116	0 0				
			£245,142	3	3	

By Property Account			£30,061	4	3	
Balance as at 31st July, 1911.						
,, Development and Equipment			52,905	0	0	
Balance as at 31st July, 1911	£53,178	5 0				
Less Equipment sold	273	5 0				
,, Mining Participations:						
As per Balance Sheet, 31st July, 1911	125	12 11				
Less Written off during the Year	125	12 11				
,, Jumpers Joint Hospital (Company's Share)			420	0	0	
As per Balance Sheet, 31st July, 1911.						
,, Sundry Shareholdings (at Cost)			118,213	10	4	
As per Balance Sheet, 31st July, 1911:						
Benoni Consolidated Gold Mines, Limited, 102,700 shares of £1 each.						
Geldenhuis Deep, Limited, 45 shares of £1 each.						
Rand Mutual Assurance Company, Limited, 118 shares of £10 each.						
Witwatersrand Native Labour Association, Ltd., 290 shares of £1 each (12s. paid).						
,, Benoni Consolidated Gold Mines, Limited			6,333	6	8	
Advance secured by Second Mortgage Bond						
			£209,933	1	3	
,, Stores and Materials	£3,927	2 8				
,, Livestock and Vehicles	250	0 0				
,, Furniture	49	0 0				
			4,226	2	8	
,, Sundry Debtors and Payments in Advance			1,962	18	5	
,, Gold Consignment	£10,426	15 9				
,, Cash at Bankers and in Hand	18,593	5 2				
			29,020	0	11	
			35,209	2	0	
			£245,142	3	3	

Dr. Appropriation Account for Twelve Months ended 31st July, 1912. Cr.

To Reserve Fund, set aside in terms of Agreement with Treasury Gold Mines, Limited			£4,377	19	4	
,, Profits Tax (estimated)			1,622	16	0	
,, Mining Participations written off			125	12	11	
,, Appropriated on Account of Loan to Benoni Consolidated Gold Mines, Ltd.			7,934	8	9	
,, Balance to Balance Sheet			8,447	4	8	
			£22,508	1	8	

By Balance Unappropriated as at 31st July, 1911			£8,440	0	0	
,, Balance from Working Expenditure and Revenue for Year ended 31st July, 1912			13,753	16	5	
,, Dividends on Shareholdings			104	10	0	
,, Rebate on Gold Freight			188	2	11	
,, Amount Recovered on Account of Mining Participations, previously written off			21	11	5	
			£22,508	1	8	

FRED. FLEISCHER, Resident Secretary.
COMPAGNIE FRANCAISE DE BANQUE ET DE MINES, Secretaries.
per C. H. HOLDER.

H. O'K. WEBBER, Chairman and Managing Director.
S. C. BLACK, Director.

To the Shareholders of
"The Jumpers" Gold Mining Company, Limited.

We report that we have examined the above Balance Sheet with the Books and Vouchers of the Company for the year ended 31st July, 1912, and have obtained all the information and explanations we have required as Auditors. In our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given us, and as shown by the Books of the Company.

Johannesburg, 12th October, 1912.

W. J. DOLD,
Incorporated Accountant,
J. P. ABLETT, F.C.P.A.,
Auditors.

"The Jumpers" Gold Mining Company, Limited—continued.

Working Expenditure and Revenue Account for Twelve Months ended 31st July, 1912

Dr.			Cr.	
To Mining Expenses		£123,455 2 10	By Gold Account	£197,018 16 9
,, Reduction Expenses		40,315 11 11		
,, Accumulated Slimes Treatment		4,980 1 5		
,, General Expenses		7,365 19 7		
Printing, Stationery and Advertising	£491 15 8			
Directors' and Auditors' Fees ...	830 0 0			
Licences	943 5 0			
Head Office and Agency Fees ...	1,225 0 0			
Sundries, including Maintenance, Insurances, etc.	5,482 7 1			
	£8,972 5 9			
Less Sundry Revenue ...	1,606 6 2			
		176,116 15 9		
,, Balance		20,902 1 0		
		£197,018 16 9		£197,018 16 9
To Amount Handed over to Treasury Gold Mines, Limited, in settlement of their share of Profits, in terms of Agreement		7,148 4 7	By Balance brought down	£20,902 1 0
,, Balance to Appropriation Account		13,753 16 5		
		£20,902 1 0		£20,902 1 0

FRED. FLEISCHER, Resident Secretary.

COMPAGNIE FRANCAISE DE BANQUE ET DE MINES.
Secretaries.
per C. H. HOLDER.

Johannesburg, 12th October, 1912.

H. O'K. WEBBER, Chairman and Managing Director.
S. C. BLACK, Director.

Examined and found correct.
W. J. DOLD,
Incorporated Accountant,
J. P. ABLETT, F.C.P.A.,
Auditors.

The Grootvlei Proprietary Mines, Limited.

(Incorporated in the Transvaal.)

REPORT OF THE DIRECTORS

For the Year ended 30th June, 1912.

Submitted to the Shareholders at the Fifth Ordinary General Meeting of the Company, held at the Company's Offices, Lewis & Marks Building, Johannesburg, on the 25th day of October, 1912, at 12 o'clock noon.

To the Shareholders,

Your Directors beg to submit their Fifth Annual Report and Audited Statement of Accounts for the year ended the 30th June, 1912.

CAPITAL.

The Capital of the Company remains unaltered. The Nominal Capital is £100,000, divided into 100,000 Shares of £1 each, of which 361,650 are fully paid and issued, leaving 38,350 unissued and held in reserve.

MINING WORK.

Shaft Sinking has not been resumed during the past year, financial considerations not permitting, and all work has been in abeyance on the property. The financial position of your Company, as will be seen from the Accounts submitted, remains practically the same as at the end of the previous financial year, and beyond the necessary charges for caretaking, insurance, etc., no expenditure has been incurred. In their last report your Directors advised you that they were waiting for an opportunity to place the Company in a financial position to resume work, and during the past year no opportunity of doing so presented itself.

Your Board are glad, however, to call the shareholders' attention to the greater and more favourable attention now being paid to the further East section of the Witwatersrand, due entirely to the consistently good results attending development work being prosecuted by the Companies holding mining ground on the farms Brakpan, Modderfontein and Geduld, and the large and increasing scale of profits being earned by those Companies who have reached the output stage. The past year has seen the commencement of milling operations by the Brakpan Mines and the Modderfontein B. Gold Mining Company, and the very satisfactory profits earned by those Companies since the start of their Reduction Plant, is being reflected in the rise in these Companies' shares.

Grootvlei Proprietary Mines, Limited—continued

Your Directors confidently anticipate that the time is not far distant when the investing public will appreciate the fact that the further East section of the Rand offers a field for investment second only to the Central Section and that there they have opportunities for investment that are not available in the producing mines of the Witwatersrand.

DIRECTORATE.

During the past year Mr. C. W. Villiers resigned his seat on the Board, and Mr. A. C. Mallinson was elected a Director in his stead, whose election you are asked to confirm.

Mr. Mallinson retires in accordance with the provisions of the Company's Articles of Association, but, being eligible, offers himself for re-election.

You are also asked to fix the remuneration of the Directors for the past year in terms of Article 89 of the Company's Articles of Association.

AUDITORS.

Messrs. Deloitte, Plender, Griffiths, Annan and Co., the Auditors, retire, but being eligible, offer themselves for re-election. You are asked to fix their remuneration for the past audit.

By Order of the Board,

THE AFRICAN AND EUROPEAN INVESTMENT Co., Ltd.
Secretaries.
per G. D. MASSEY.

Lewis and Marks Building,
Johannesburg, August 31st, 1912.

Balance Sheet as at 30th June, 1912.

CAPITAL AND LIABILITIES.

Share Capital—			
Registered—			
400,000 shares of £1 each.		£400,000 0 0	
Issued—			
261,650 shares of £1 each, fully paid to Vendors per last Balance Sheet	261,650 0 0		
100,000 shares of £1 each for cash	100,000 0 0		
		£261,650 0 0	
	£61,650		
Loans			11,100 0 0
Sundry Creditors			287 16 11

ASSETS.

Property—			
Mineral Rights (including Coal) on farm Grootvlei No. 176, at cost, as at 30th June, 1911			£266,139 10 10
Borehole at cost as at 30th June, 1911			14,141 10 7
Grootvlei Homestead etc., as at 30th June, 1911 ...			863 5 0
Nymphet Survey, as at 30th June, 1911 ...			70 18 7
Mine Equipment at cost, as at 30th June, 1911			68,220 18 3
Furniture, as at 30th June, 1911 ...			589 15 5
Livestock, as at 30th June 1911			20 0 0
Vehicles and Harness, as at 30th June 1911			148 19 11
Stores and Material on hand (as certified)			2,412 16 10
Share Investments—			
W.N.L.A. 60 shares of £1 each, 12s. per share paid up £36 0 0			
2s. per share, deposit on 750 shares 75 0 0			
		£111 0 0	
Rand Mutual Assurance Co. 2 shares of £10 each, fully paid		200 0 0	
			311 0 0
Sundry Debtors and Payments in Advance			101 2 8
Cash—			
At Bankers	5,117 5		
In London	9 0 1		
			5,126 5 1
General Expenditure at Mine—			
Balance as per last Account, 30th June, 1911	10,274 12 8		
Add Expenditure for 12 months to 30th June, 1912	428 16 0		
	10,702 8 8		
Less Mine Rents and Sundry Revenue received	162 12 0		
			10,539 16 8
General Expenditure at Johannesburg and London Offices—			
Balance as per last Account, 30th June, 1911 ...	8,215 1 8		
Add Expenditure for 12 months to 30th June, 1912	1,273 7 0		
	9,488 8 8		
Less Sundry Revenue received	140 0 0		
			9,348 8 8
		£373,035 16 11	£373,035 16 11

THE AFRICAN AND EUROPEAN INVESTMENT Co., Ltd.,
Secretaries.
per G. D. MASSEY.

H. GOLDMAN.
GEO. FALCKE, Directors.

Report of the Auditors to the Shareholders of the GROOTVLEI PROPRIETARY MINES, LTD.

We have audited the foregoing Balance Sheet with the Books and Vouchers of the Company at Johannesburg and the returns from the London Office. Having obtained all the information and explanations we have required, we report that, in our opinion, the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs on the 30th June, 1912, according to the best of our information and the explanations given to us, and as shown by the books of the Company.

(Signed) DELOITTE, PLENDER GRIFFITHS ANNAN & Co.,
Auditors.

Johannesburg, 19th August, 1912.

THE SOUTH AFRICAN

Mining Journal,

WITH WHICH IS INCORPORATED

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ESTABLISHED 1891.

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NOTICE.—The postage of this issue of the *S.A. Mining Journal* is: South Africa, 1½d. All other parts, 2½d.

CONTENTS.

Notes and News.

The Coal Trust and the Ermelo District.

Mainly, no doubt, as a result of the success that has attended the Breyten Collieries, other important corporations are, so we understand, looking into the possibilities of the Ermelo coalfields. We learn that the Transvaal Coal Trust has acquired an interest in the Breyten district, and that this company contemplates undertaking boring operations on the farm Smutsoog 143, in the vicinity of the Breyten Collieries Company, almost immediately.

* * * *

Union Iron and Steel Works (Dunswart): Cartwright & Eaton, Ltd.

More skilled ironworkers are arriving from Scotland, early in November, to assist the Union Iron and Steel Company to cope with their increasing business. The iron and steel products from these works are now well known from end to end of the Reef, and, in fact, all over the Transvaal, the quality and finish comparing favourably with the imported article. They are now making a speciality of extra long mild steel bars for reinforcing concrete, and can turn out bars up to 40 or more feet long. The arrival of the new men from Scotland will put them in a position to tackle additional orders, and to give prompt deliveries. Engineers and persons interested would do well to pay these works a visit and see for themselves how the iron and steel are made.

* * * *

Another Important Strike on the Further East Rand.

Yet another strike of reef in a Further East Rand shaft is announced. In this case the intersection has taken place on a productive property. It will be recalled that early last year a commencement was made by the New Modderfontein Company with the sinking of a new shaft of circular type, 18 feet in diameter in the clear, and distant from the No. 12 or eastern shaft about 6,000 feet. The reef was intersected here, and the second official announcement contained in a cable despatched to London on Thursday afternoon reads as follows:—"Reef with slate footwall fully exposed in circular shaft. Average of all samples taken on perimeter of shaft show actual reef width 20·9 inches reef value 30·5 dwts., while width of reef, together with intruding waste parting, is 48·4 inches value 13·2 dwts. Reef split on south side and slightly faulted." The excellent values taken in conjunction with the large profits being made by the New Modderfontein Company and its neighbour, the Modder B., warrant one in adopting a very optimistic view of the prospects of these two mines and the Further East Rand generally. The striking of the reef in this shaft is of the utmost importance to the New Modderfontein Company, and the intersection will doubtless be the signal for the initiation of a policy of very extensive development.

* * * *

Technical Writing.

In a discussion arising out of our article of last week on "The Grade of Rand Ore," it has been pointed out to us that the word "grade" is one of those which might usefully be considered by persons who are interested in the question of precision and clearness in technical writing. Strange to say, it finds no place in the index of words given at the end of T. A. Rickard's valuable little book entitled "A Guide to Technical Writing," and, still more strange, it does not appear to have come under the notice of the Chemical, Metallurgical and Mining Society of South Africa or of that of the Institution of Mining and Metallurgy. It is, nevertheless, a word which is commonly used somewhat loosely in technical writing. A dictionary gives

the meanings of "grade" as "a degree, step, rank, or division in any order, as of dignity, quality, proficiency, or ability, in any series involving relative position or standing, or in any course of instruction; quality; rank: standing." One may, therefore, speak quite correctly either of a "recovery grade" or of an "ore grade." Inasmuch as it is desirable to have clearness in technical references, however, it would probably be better to use the terms in one particular sense, that is to say, where metallurgical and mining questions are dealt with. The word "grade" is, on the Rand, used generally with a verbal meaning, and in its participal form is applied to the sorting of particles of ore according to size. "Grading analysis" is a well understood expression, and if the word "grade" were only employed to describe the various degrees of this analysis no confusion could arise, and the technical dictionary would be enriched with an appropriate term. As a substitute for the expression, "grade of ore," the word "value" would well suffice, while the word "yield" would equally well meet the requirements of "recovery grade."

* * * *

Rock Temperatures at 7,000 Feet.

Our valued American contemporary, *The Engineering and Mining Journal* of New York, contains in the issue to hand by this mail one or two interesting statements from its Johannesburg correspondent. Undoubtedly something in the nature of a revival of interest in deeper level mining is taking place, and accordingly attention may be directed to the views of the *Engineering and Mining Journal* on the subject. Our contemporary gives prominence to a point which we ourselves on several occasions in the past have directed attention to, namely, the steepening of the reef in the deepest workings on the Central Rand. The paper remarks:—"In the deepest levels of the Village Deep, on the Central Rand, the main reef series, after flattening to under 30 degrees, is now dipping 40 degrees and giving good assays. It is cheaper to mine on the steeper dip, as less shovelling is required in the stopes, but the highest rock temperature at which it is possible to mine will be reached sooner. At 7,000 ft. vertical, a rock temperature of 97½ degree is expected. Roof pressures will likely prove the deciding factor in limiting mining in depth." Apart from cheaper shovelling costs, it should be appreciated that the tonnage per claim is substantially greater with a high angle of dip than a low. This is really the outstanding feature of the Village Deep discovery. The remarks in regard to temperature at depth are of particular interest. We do not know whether the anticipation that at 7,000 feet vertical a rock temperature of 97½ degrees is expected is an official expectation or not, but in any case we venture to prophesy that, providing the ore is profitable, there will be few sections of the Witwatersrand in which work is not proceeding at a depth of 7,000 feet, or even more, within the next quarter of a century. We admit that roof pressures will prove a very important factor in schemes of deeper level mining, and we agree with our contemporary's correspondent that they are likely to prove the deciding factor.

* * * *

What is Development?

An unusually interesting and important mining subject is at the moment engaging the attention of some of His Majesty's judges in the Transvaal. The Commissioner of Inland Revenue has brought an action against the Nourse Mines, Ltd., for the purpose of making good his claim against the company for certain sums alleged by him to be due on account of profits tax and interest accruing thereon. The dispute hinges on the right of the company to debit certain work to working costs instead of to capital account. Before calculating the proportion of a company's profit which is to be deducted as profit tax, at the rate of 10 per cent. of the net profit, the Treasury allows certain deductions to be made from the gross profit under the head of amounts due to amortisation. That is to say, a certain definite amount is deducted, which at a certain rate of compound interest, is calculated to amortise a definite proportion of the capital of the company over the estimated life of the mine. This proportion of the gross profit is not subject to taxation. Obviously if any expenditure which may justly be considered capital expenditure is charged to working costs, the profits are reduced, on paper, and, *pro rata*, the taxable sum is also reduced, to the disadvantage of the Treasury. It is to the interest of the latter that everything that can properly be termed capital disbursements should be wiped out by the method of amortisation rather than by direct and full charges against profit. As a result of this conflict of interests, and therefore of opinions as to what is and is not a capital expenditure, the case of the Commissioner of Inland Revenue versus Nourse Mines, Ltd., referred to, has been brought before the Supreme Court. The judgment should lead directly or indirectly to some clearer definition of what is and what is not legitimate working cost.

* * * *

Rhodesia—An Excellent Brochure.

We have received from the Publicity Department of the South African Railways a brightly written and well illustrated brochure entitled "Rhodesia." The avowed object of this publication, which has been compiled by direction of the Rhodesia Railways and the South African Railway Administration, and has apparently been produced in South Africa, is to invite attention to "a new and pleasant field of travel; a country of scenic beauty, romantic interest, and climatic excellence." The covers are tastefully got up as colour scenes of the Victoria Falls, with which wonderful sight the little volume is largely concerned. The would-be traveller is taken on a tour from Capetown through Kimberley and Bechuanaland to the Zambesi. Bulawayo, the majestic Matoppos, the Khami River, and Salisbury are visited, and a pilgrimage made to the wonderful old temple of Zimbabwe. There is an interesting article on sport in Rhodesia, and much general information on such matters as Rhodesian seasons, steamship and railway routes, fares and accommodation. For those who have not yet visited the land of Rhodes the brochure is calculated to breed a great desire to "do" Rhodesia. To those who are not strangers to Charterland the little volume, with its admirable photographs, recalls a host of sunlit memories.

* * * *

The Mosquito at the Rooiberg.

The improved health conditions at the Rooiberg, where fever was at one time rampant, is another testimony to the efficiency of those precautions which are recommended by the Anti-Malarial Association. To "the vigilance of the medical officer, improved hygienic conditions, and to the provision of mosquito-proof screens to the quarters," according to the chairman of the company, may be attributed the fact that a recrudescence of malaria has been prevented. In order to circumvent the anopheles still more effectually, arrangements have been made to stock the large dam with "millions," a small fish said to be indigenous to the West Indies, which is accustomed to live riotously on the larvæ of the mosquito.

* * * *

Native Labour and Small Drills.

The question whether the supply of native labour available is likely to prove sufficient to provide the tonnage contemplated at the Knights Deep has exercised the minds of the directors, and in this connection they have derived considerable encouragement from the success which is attending the increased use of small drills. Careful experiments, towards the cost of which the companies of the Consolidated Gold Fields group have contributed, have for some time past been in progress on the Knights Deep, and though these experiments were to some extent interrupted by the disorganisation caused by the recent fire, it now seems reasonable to anticipate that by degrees the use of small drills will enable the mine to dispense with a very considerable amount of hard labour without any increase in working cost.

An interesting point arose at the "Johnnies" meeting last week, owing to the lack of direct interest evinced by oversea shareholders in the proceedings. Mr. Munro said:—"The directors' report, together with the statement of accounts, was issued to all shareholders on August 30 last, considerably earlier than in previous years. The main reason for this early publication was to give the many thousands of shareholders in England and elsewhere the opportunity of being present or represented at our annual meeting to-day. No proxies have been received from oversea shareholders, but I do not attribute their absence to any lack of interest in our concerns, but rather to shareholders' confidence in the manner in which the directors have conducted the affairs of your corporation in the past."

Satisfied Shareholders.

* * * *

In the course of his speech at the "Johnnies" meeting, Mr. Munro, the chairman, apropos of the financial outlook, said:—"In the last address from the chair attention was called to the adverse conditions that had prevailed owing to industrial disputes and other causes. The same conditions, I regret to say, have continued during the year covered by the accounts now under review, and as stated in your directors' report, the period has been one of unbroken depression and stagnation, which has materially affected our profit-earning capacity. It must, therefore, be a source of congratulation that in one of the worst years on record the company made a substantial profit, and was able to declare a dividend of 5 per cent., absorbing £197,500, and that the amount carried forward to the next year's account has been increased by the sum of £9,000. This dividend was declared on June 19, and has since been paid. Although the dividend is not so large as we could have wished, I think that when we consider the prevailing conditions, shareholders have every reason to be satisfied with the result obtained, as well as with the strong financial position of your company, as set forth in the accounts now before you, and therefore in normal times there is every prospect of the shareholders receiving a considerably larger return."

"Johnnies" Finances.

* * * *

During the quarter ended September 30 at the Princess, the footage driven, risen and sunk on the reef and sampled was as follows:—South Reef, 1,605 feet, averaging 9·23 dwts. over 25 inches; Main Reef, 505 feet, averaging 6·2 dwts. over 39·57 inches. It is estimated that the payable ore (based on the milling width) developed by the above footage is: South Reef 56,730 tons, Main Reef 12,783 tons; total, 69,513 tons. These figures are subject to re-calculation at the end of the year when block values are made out.

Princess Estate.

* * * *

Operations at the New Kleinfontein Company during the quarter ended with September last resulted in a profit of £65,817, or 8s. 10d. per ton milled, as compared with £58,566 in the preceding quarter. Working costs, yield and profit on the per ton milled basis showed little variation during the two periods, but the ore milled was 18,200 tons more. In consequence the aggregate output, working costs and profit were all greater than in the three months ended with June. The amount of shaft sinking done during the quarter was 220 ft. 6 ins., and the amount of development 5,850 ft. 6 ins. Of this 2,785 ft. were sampled, and the disclosures were: Average milling width 39·94 ins., average assay value 8·8 dwts. In the June quarter 4,852 ft. were driven, etc., 2,835 ft. sampled, the average milling width was 44·25 ins., and the average assay value 8·69 dwts. Capital expenditure incurred during the quarter amounted to £10,417, and at the end of September the ore reserves were as follows:—Payable, 1,125,296 tons, milling width 44·13 inches, value 7·80 dwts.; unpayable, 493,158 tons, milling width 40·61 inches, value 3·54 dwts.; totals and averages, 1,618,454 tons, milling width 43·01 inches, value 6·51 dwts.

The Quarter at the New Kleinfontein.

TOPICS OF THE WEEK.

FOUR RAND MINE MEETINGS.

Four typical Rand mining companies held their annual meetings in the past few days. The Knights Deep may be taken as an example of a prosperous deep level mine with low working costs as its chief feature. The "Jumpers" is a particularly good illustration of an outcrop outliving expectations; and the Grootvlei and Western Rand Estates, on either extremity of the Rand, reflect the water and other troubles that have to be met. To take the last first, shareholders must be content with the chairman's hope that "the time may not be far distant when the exploitation of our valuable property may be recommenced." Grootvlei is, of course, in a better position, because, though it has water troubles of its own, the outlook for the whole Far East Rand has so wonderfully improved of late that there should now be no difficulty in raising the capital necessary to pursue operations. The excellent results from all the neighbouring properties afforded Mr. Fricke the theme for his address, and fully justified his expression of confidence in the future of the property. At the Jumpers meeting, Mr. H. O'K. Webber was able to point to several good features to offset the disappointment occasioned by the failure of the Benoni plant. Strict economy is being observed, and though the last ton of ore may be drawn from the Jumpers by the end of this year, the Treasury will last well into 1913. Mr. Webber paid a tribute to the excellent work being done by Mr. Richards and his men, and it is not too much to say that the handling of the Jumpers in its declining years has been one of the best features of Rand mining. It is to be hoped that a successful fruition to the scheme to amalgamate the Apex and Benoni will recoup the Jumpers for its "paper" losses in the latter venture. At the Knights Deep, the most satisfactory feature, as revealed by Mr. Chaplin, is the further reduction of working costs from an average of about 11s. 8d. per ton for the year ending 31st July, 1911, to 11s. 6d., or, exclusive of expenditure on renewals, to 11s. 1d., a reduction of about 4·203d., a result which, after making full allowance for certain conditions favourable to cheap mining, is, of course, highly creditable to the management. The most interesting announcement in the speech was that dealing with the additions to the plant. Mr. Chaplin explained that in view of the highly-developed position of the mine and the advantage to be gained by lowering the pay limit to some extent, the directors have lately been considering a proposal by the superintending engineer to provide additional tube mills and treatment plant sufficient to permit of the tonnage capacity being raised to an average of 103,000 tons per month, and of the treatment being carried out on the best possible lines. The money required for the purchase and installation of this plant will be provided partly out of the insurance money received in respect of the crusher station recently destroyed and partly out of the proceeds of the gold estimated to be recovered from the existing mill plates. The new installation, designed in accordance with the most modern practice, will render these mill plates unnecessary, and the company will therefore be able to recover forthwith the gold therein contained which would otherwise have lain idle in the plant for years to come. This arrangement will obviate the necessity of drawing from ordinary profits any portion of the money required for this additional plant. At a later date it may be found advisable to increase the capacity by a further 5,000 tons, and the new plant will be designed so as to admit of this increase being made at small expense should circumstances later on render it necessary. It is anticipated that

this new plant should be in operation about April next. According to the chairman, the actual development work to be done is very small. The mine has very large bodies of ore of a low average grade but capable of being cheaply mined, and the best results can and doubtless will be obtained by milling on a large scale with a plant reorganised on the most modern lines. The Knights Deep furnishes an excellent example of a carefully-managed Rand deep level, and the shareholders are to be congratulated on the wise handling that has put the property in so sound a position.

ROOIBERG AND THE CRITICS.

Meetings of the shareholders in the two leading tin producers, Rooiberg and Zaaiplaats, were held this week, and are dealt with elsewhere in this issue. For obvious reasons, the Zaaiplaats meeting was looked forward to with great interest. Even more interesting than the Zaaiplaats meeting was that of the Rooiberg Minerals Development Company, Ltd., at which the Chairman, Col. W. Dalrymple, devoted a great deal of time to those critics who have been finding fault with the statements of the balance sheet and profit and loss account. The general nature of these complaints was outlined in one or two issues of this journal several weeks ago. Dealing with the matter of general charges at the mine, the Chairman explained that £1,001 represented amounts spent on building construction, £600 was expended on labour recruiting organisation, and £1,414 was due to general surface repairs, the balance of the £8,548 14s. 7d. being divided into administration salaries, wages, sanitation, insurance, etc. In the Zaaiplaats accounts, which were placed parallel with those of Rooiberg in one of the *S.A. Mining Journal* articles referred to, some of the items would probably have figured under the head of capital expenditure, and mine labour. With regard to the matter of the realisation charges, it was pointed out that while no account was taken at Zaaiplaats of the returning charges, which are usually fairly heavy on tin concentrates, the amount in question being deducted from the price paid for the consignment, the opposite practice was in vogue at the Rooiberg. By stating only the net price received for concentrates, the returning charges do not appear in the cost per ton at Zaaiplaats, whereas with the statement of the gross value of the concentrates at the Rooiberg the returning charges appear against it on the expenditure side. Col. Dalyrymple is of opinion that if the accounts of each mine were presented in the same way the advantage would be on the side of the Rooiberg as regards realisation charges per ton.

The reference to ourselves clearly calls for some reply. The Chairman said:—

> "A comparison was recently made in the 'South African Mining Journal' of our costs with those of the Zaaiplaats Tin Mining Company, Limited. This showed great differences both in general charges and cost of realisation. The comparisons were made by the editor of that journal, without any apparent effort on his part to obtain an intelligent explanation of the differences which he admitted were due to the fact that 'the items in each case do not cover the same operations,' and I think that, had he taken the trouble to look into matters before publishing his article, considerable modification would have resulted, he would have avoided confusion in the minds of the shareholders of both companies, and the article might have been of more practical value to his readers. A most casual inquiry would have revealed the fact that as regards general expenses, the general expenses—mine are, in the Zaaiplaats accounts, distributed over other mine costs, while our accounts make a feature of showing these expenses separately; and, in the case of realisation charges, the Zaaiplaats Company deducts the returning charge from the gross value of its tin; this, as you will see, is the main item in the cost of realisation. The tin in the accounts of the Zaaiplaats Company is thus shown net, while in ours, the gross value is shown on the credit side and the returning charges are included with other costs of realisation on the debit side of the revenue and expenditure account. I think that if the Zaaiplaats figures were available, it would be found that our realisation costs were no higher than theirs. I go further and say that ours would be better, as I understand that, until recent improvements were brought about in the Zaaiplaats Company's tin dressing equipment, our product contained less impurities."

The answer to this, of course, is that it is no part of our business, indeed it might be regarded as impertinent of us, to demand "intelligent explanations" of figures published in balance sheets. If we had to seek explanations before writing there would be no time left to us in which to write at all. Our medium is the printed page, and if we express anything that is unfair or unjust, we are only too anxious to give a correction the same prominence.

The matter of financial policy in respect of sums spent on development, exploration and shaft sinking was discussed by Colonel Dalrymple, and it was explained that the much more erratic and uncertain character of the tin deposits as compared with the more or less regular conditions which prevail along the Rand made it obvious that it was both incorrect and imprudent to adopt a system of development redemption in one area which might be perfectly sound and convenient in the other. Another difficulty to be considered in this connection was the fluctuating nature of the metal market, so that ore which might be worked at a profit at one period might at another be far below the margin of payability. These circumstances were referred to in our article upon this particular matter in the issue of the 21st September last. While admitting that the conditions are so widely different upon the Rand from what they are in the Waterberg tin fields, however, it must be remembered that a hard and fast establishment of the principle that development must be paid for as it is carried out is not altogether fair to shareholders who have stood the brunt of a difficult time, and who cannot be expected to finance a property for the benefit of a future generation. On the other hand, development upon a generous scale is particularly required if the Rooiberg mine is to flourish as it should, and if justice is to be done in due season to the great possibilities of the property, and an extreme solicitude for dividends might easily lead the concern into serious difficulties. It is much to be desired that some middle course should be adopted, or that some means of opening up the property may be devised which would relieve the company of a burden which is rather more than it can conveniently carry. It has been suggested that a subsidiary company should be formed to explore and work some portion of the great area held by the Rooiberg Company, but Colonel Dalrymple, with a wide knowledge of the methods of financiers and promoters, foresees the possibility of "giving away a valuable property for a mess of pottage," and advises shareholders to continue exploration for the present. His advice appears sound, and shareholders can only live in hope that this exploratory work will soon provide sufficient justification for the flotation of a subsidary venture, in which they will be able to hold their own. With a board and management such as they now possess on the one hand, and with a property of so great promise on the other, their restraint and self-sacrifice should not go long unrewarded. In the meantime an interim dividend of 12½ per cent. is foreshadowed for next December if affairs progress favourably; the mill is doing excellent work and has abundantly justified its erection; developments, while not sensational, have continued to be satisfactory, and there seems no reason to question the statement from the chair that, provided the price of tin is fairly maintained, there is before the company "an era of prosperity."

BREYTEN COLLIERIES.

The Transvaal's Latest Coal Producer—Full Description of the Mines and Equipment—Output to be Increased to 55,000 Tons per Month—a Vast Area of Coal-bearing Ground—Ninety-eight per cent. of the Product Marketable—Company about to Enter the Dividend-paying Stage.

Within the past two years a new factor has entered into the arena of Transvaal coal production in the presence of the Breyten Collieries, Ltd., a concern which, under the control of the Consolidated Gold Fields of South Africa, has already attained to a position of first-rate importance amongst the collieries of South Africa. Until the Breyten company came into notoriety last year, in consequence of the rate granted by the South African Railways to the coal district in which these collieries are situated, in order to bring it into line with the "competitive area," the fact that a large and promising proposition was fast being brought to the productive stage apparently did not enter into the philosophies of most people. However, the much discussed rate question brought the company into prominence as a prospective producer. The question of railway rates is of such importance that further reference to the matter is called for. Prior to August 1st of this year the rate from Breyten to Germiston was 7s. 7d. per ton, which, over the 143 miles, works out at ·636d. per ton per mile. The new rate is 6s. 4d., or ·531d. per ton per mile. The old rate from Witbank was 6s. 9d., or 1·013d. per ton per mile for the eighty miles, and the new rate (as from August 1st, 1912) 5s. 3d. or ·788d. per ton per mile. Breyten station is distant 152 miles by rail through Brakpan from Johannesburg in an almost due east direction. The branch line to Breyten, which has been extended to Piet Retief, leaves the main through route from Pretoria to Delagoa Bay at Machadodorp. The Brakpan route, inasmuch as it is by far the shorter, is used for delivery of product to the Witwatersrand and the procuring of stores and machinery for the mines. The collieries are connected up with Breyten station by a branch line seven miles long. It is of 3ft. 6in. gauge, and coal trucks are hauled from the plant to Breyten by three locomotives. The company possesses leases of coal rights over 4,460 morgen on the farms Bankfontein No. 14, Klipfontein 144, and Schaapkraal 7, in the Ermelo district, a region which has for long been known to contain very extensive coal measures. Until the Consolidated Gold Fields of South Africa company identified themselves with the proposition under consideration there was, however, very little real activity to be observed. The company originally was registered in Pretoria on November 3, 1909, with a nominal capital of £6,000, which was increased to £21,000 on December 28th of the same year; further increases afterwards took place, namely, to £60,000 on 14th October, 1910, and to £100,000 on 28th April, 1911, of which £90,000 is issued capital, 10,000 shares being held in reserve.

The coal-bearing area exploited by the Breyten Collieries lies in the upper valley of the Komati. The coal seams have been exposed by erosion and other natural agencies on the sides of the ridges. In opening up the proposition full advantage has been taken of the natural contours, and development has, through the presence of subsidiary valleys and vleis in the main basin, been much expedited. The rapidity with which the proposition was brought to the productive stage has probably never been equalled in the annals of South African coal mining. Admittedly the natural facilities for rapid and economical exploitation were great, but the presence of these advantages in no way detracts from the rapid and efficient work that has been carried out. Work was commenced at the property in August, 1910. There was at that time no branch line connecting up the mine with the railway, and all material had to be transported by ox wagon. Production was, however, commenced on February 10th, 1911. The first coal sold did not, however, come from the more central portion of the property, where work is now proceeding, but from a small adit situated on that portion of the property nearest to Breyten station. A small gantry was erected, and a considerable amount of coal despatched. Meanwhile the heaviest portion of construction work in connection with the branch line, which involved the building of a substantial stone viaduct, was completed, and on March 27th, or seven months after the commencement of work, the branch line was completed, and the whole equipment at the collieries in running order. From that date operations have gone on without a hitch, and the property has attained to a highly important productive stage in a period of time which reflects the greatest credit on the management. Anyone visiting the Breyten property to-day for the first time will experience considerable difficulty in realising that two years ago the area, which now presents such a busy picture, was mere bare veld. Apart from the mine workings and equipment, a substantial manager's house, well-built married and single quarters and offices, etc., have been erected on the south side of the valley. On the northern side the preliminary sections of a stone built native compound have been erected, and there are also a number of stores and a well-equipped native hospital. At present there are employed 39 whites and 700 natives, and the numbers are likely to be materially increased in the near future, in order to cope with a larger output.

The main screening and picking plant is of efficient type, and is situated below the dwelling-houses and offices on the southern slope from the vlei, or valley. It consists of three sorting tables, shaking screens and tipplers complete. The coal requires but little sorting, as it is of good uniform quality throughout. There are three travelling sorting tables installed, but at present only two are in use. The third will be requisitioned when the plant is increased to 55,000 tons capacity per month about the middle of next year. There are also at the main plant five Babcock and Wilcox boilers, and two more and a new smoke stack are to be installed almost immediately. Two Ruston Proctor steam engines are employed for operating the surface haulage. For driving the coal channelers and hammer drills underground there are three Belliss and Morcom two-stage vertical air compressors, two of 3,500 cubic feet of air per minute and one of 2,500 cubic feet per minute capacity. Two of these are now at work; the other is at present used as a standby. A further compressor of larger capacity is to be installed in order to complete the mechanical portion of the surface plant up to 55,000 or more tons per month capacity. As regards the electrical side of the equipment, there is at present one 50 K.W. generator erected, and contracts have been placed for the erection of two Bruce Peebles generators, each of 250 K.W. capacity. Adjoining the power plant is a useful fitting shop equipped with lathes, etc., for the greater part supplied by D. Druy and Company, Johannesburg. From the main plant a gantry descends to the valley, and then ascends to the workings on the other side. On to this main gantry trucks converge from all the points under attack, and are pulled to the main screening and picking plant by endless rope haulage. The whole installation is working admirably. The empties, after discharging their contents in the tipplers, return around the gantry and so back to the loading points with exceedingly little supervision or labour. It would indeed be difficult to conceive a better arrangement than that in vogue.

The principal work proceeding at present is in the northern and eastern portions of the central area. Four main adits have been driven into the sides of the ridge for the following distances:—No. 1, 2,000 feet; No. 2, 1,500 feet; No. 3, 1,200 feet; No. 4, 100 feet. Another adit, to be known as No. 5, is about to be started to the south of

THE BRAKPAN GOVERNMENT LEASE.

Ore Values in the Far East Rand—Prospects of the New Brakpan Ground—The Basis of a Super-Tax.

It will probably be a somewhat difficult matter for those who wish to tender for the Brakpan Government Lease ground to arrive at any satisfactory conclusion with regard to the value of the area from the point of view of working profits. It will, nevertheless, be necessary to arrive at some sort of basis upon which to calculate the additional tax, or premium, which is expected by the Government as a preliminary to considering the offers which may be made. The only way to establish such a basis is, of course, to draw such deductions as are possible from the available evidence in the shape of ore reserves and boreholes as may reasonably be regarded as bearing upon the matter. The ore reserves at the end of last year at the various developing and producing mines of the further East were as follows:—

	Ore Reserves.	
	Tons.	Value per ton
Benoni	606,839	27/ 9
Brakpan	1,925,346	28/ 6
Geduld	607,300	34/ 9
New Kleinfontein	1,146,531	31/10
Modder B.	2,355,700	31/10
New Modder	3,341,830	32/ 3
Van Ryn	1,655,910	27/ 0
Rand Collieries	374,200	22/11
Van Ryn Deep	603,716	30/ 6

A rough average, that is to say, an averaging of the values alone without regard to the tonnage represented, shows that the milling ore from this district is worth approximately 30s. per ton. Working costs for the month of September last ranged between a minimum of 17s. 3d. per ton milled at Brakpan and a maximum of 21s. 2d. at Geduld. Such boreholes as are in existence, and the data obtained from the shafts at the Modderfontein Government Lease and Modder Deep cannot be said to throw any further light upon the values of the district as indicated in the ore reserve statement given above, except in so far as they are generally confirmatory. An examination of the working profit for the month of September of the mines included in our list—excepting those which are not crushing—shows that the lowest was 6s. 8d. at Geduld, and the highest 24s. 4d. at New Modderfontein. It would be scarcely just, perhaps, to take the figures of either of these two companies for the purpose of constructing a basis of calculation which would serve the requirements of the Brakpan Government Lease; while Brakpan, the producing company immediately to the rise of the ground in question, shows results which are obviously too good to be taken as a safe guide for the dip claims. For the sake of argument, it may be assumed that the Brakpan Lease has milling ore of an average value of 30s. per ton milled, and that the working cost will amount to about 10s. per ton milled. Upon this basis the minimum royalty demanded by the Treasury would be, say, 3s. 4d., leaving a balance of 6s. 8d. per ton to the lessee.

The Crushing Capacity.

Assuming that as much as 6s. of this amount would be available for dividend purposes, a somewhat sanguine anticipation, it remains to be seen what the total annual dividend would be likely to be. At the first annual general meeting of the Government Gold Mining Areas (Modderfontein) Consolidated, Ltd., Mr. John Munro, the chairman, said: "The total annual profits will naturally depend upon the value of the reef and the scale of working, but as the property is very large, there is no reason why we should not, when the mine is fully opened up, crush at the rate of 1,200,000 tons per annum, though we must necessarily work on a smaller basis to commence with." The Modderfontein Lease comprises 2,637 claims, that of the Brakpan lease 2,235, so that the crushing rate to be finally adopted at each of these properties will probably be approximately the same, supposing that other circumstances do not stand in the way. If anything, the scale of operations on the Brakpan ground, owing to the facilities for development, would probably be smaller than on the other area. As Mr. Munro points out, however, the magnitude of the plant on the Modderfontein lease will not, for some time, be equal to a capacity of 1,200,000 tons per annum, and it is not unlikely, indeed, that only about 750,000 tons per annum will be considered quite sufficient to make a beginning with. Reckoning upon a similar initial crushing capacity for the Brakpan lease ground, and profits available for distribution as high as 6s. per ton milled, the annual sum apportioned to dividends would be £225,000 or rather more than 18 per cent. on the stipulated capital of £1,200,000.

The Speculative Element.

The question arises whether an 18 per cent. return on the money invested is likely to be regarded as satisfactory by the money market. As the proposition stands, the question could no doubt be easily answered in the affirmative as far as a Rand gold mine is concerned. It has to be borne in mind however, that the ultimate price to the investor of a good deal of the Brakpan lease stock will doubtless be considerably above par, in spite of any Government stipulation or decree to the contrary. The point to be determined, therefore, is not whether 18 per cent. is a sufficiently good return upon a £1 share, but whether it is likely to be adequate recompense for those who will be induced, by one reason or another, to invest in the scrip of the Brakpan lease venture at enhanced prices. In a word, the people who will be responsible for the putting up of the £1,200,000 will probably not base their estimates on mere dividends, and if there is to be any useful margin for speculative operations a possible dividend rate of 18 per cent. on the par value of a Rand mining share does not present any overwhelmingly attractive features. It is not to be supposed that any tenderer would attempt to deal with the Government on such lines as these, or would openly confess to putting in an offer based upon speculative possibilities. The mining market is, however, largely, if not entirely, influenced by considerations of this kind, and any estimate of the limits within which it will be reasonable to fix a premium upon the minimum royalty can scarcely fail to take cognisance, to some extent, of the speculative factor. From this point of view it will be seen that on a crushing of 750,000 tons per annum and a clear working profit of 10s. per ton milled, out of which 6s. will be available for dividends, the margin for the super-tax is not very great. With less favourable conditions than these the prospect of gratifying the Treasury without doing real injury to the company would be even less cheerful. Upon a higher profit basis matters would be much simpler, but, as far as can be gathered from an examination of the Chamber of Mines returns from the further East Rand, the crucial point of the scale of taxation will lie somewhere about the 30 or 33 per cent. profit limit. Up to and including this stage, then, the Government should be content with as small an advance as possible upon the minimum stipulated for in the terms of the lease; after that a little generosity on the part of the intending lessor may justly be looked for.

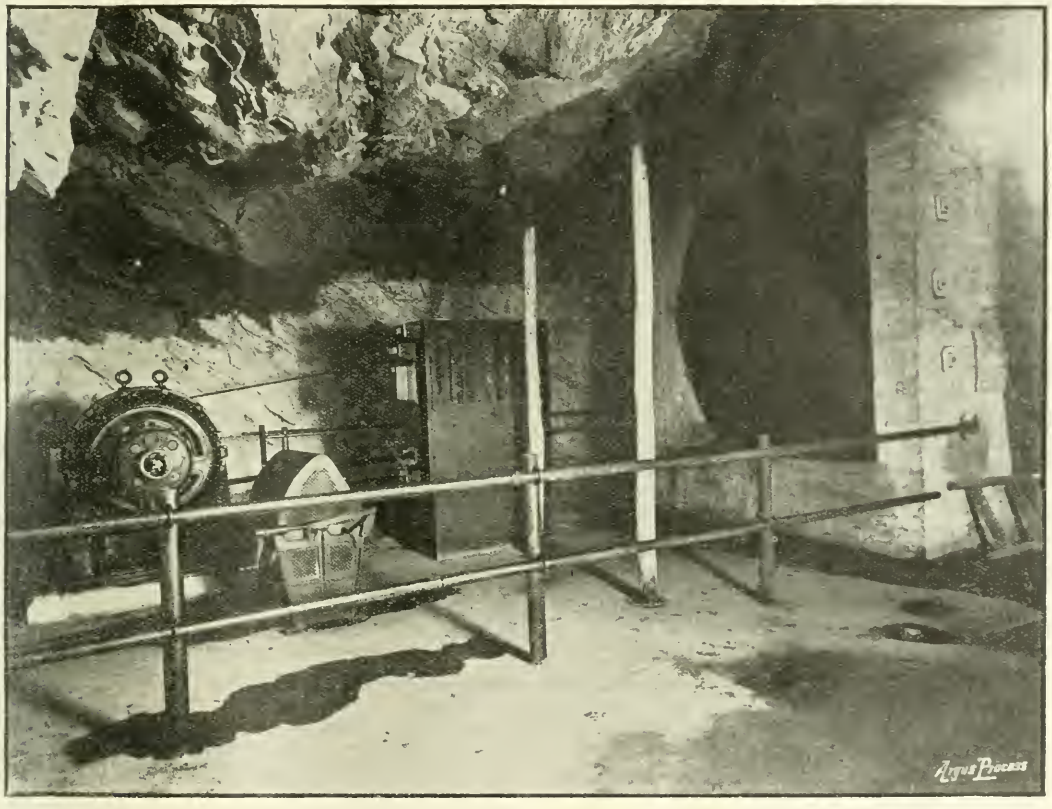
Rosetta G.M. Co.

Rumours that the Rosetta was about to close down have been officially denied, and the intention is to push on development. An air compressor has been ordered.

IMPROVING UNDERGROUND VENTILATION.

Campaign of Reform Bears Excellent Results—The Large Fan at the Robinson Deep.

That the controllers of the industry are determined to make the underground workings of the Witwatersrand as healthy and pleasant to work in as possible no one who is in constant touch with the actual underground conditions can deny. The results of the campaign that has been waged unceasingly throughout the past year or two against dust and bad air are already markedly noticeable throughout the length and breadth of the Reef, and there certainly are no reasons for thinking that the good work so far achieved will in any way be relaxed. At present nearly two dozen large fans are at work or in course of erection in Witwatersrand mines, and in addition a considerable number of small fans for improving the volume and quality of underground air are in use. The majority of the large ventilating appliances installed are of Sirocco type, but fans of Rateau and Capell make are also in use. These fans, in conjunction with sprays and the giving of more attention to the study of air currents and bratticing, have unquestionably done a great deal towards improving underground working conditions. The Consolidated Gold Fields of South Africa throughout has played a leading part in the reformative campaign, and at the subsidiaries under Gold Fields control large improvements in ventilation have been effected. Besides equipping their mines with a number of small fans and giving particular attention to sprays and bratticing, the Gold Fields management has put in three large fans—one in the Simmer Deep, one in the Jupiter, and one in the Robinson Deep. The fan in the Robinson Deep, of which we here reproduce an illustration, is installed on the 1,900 feet level, and in the No. 2 shaft section of the property. It is of Sirocco type, 84 inches in diameter, and has a capacity of 178,400 cubic feet of air per minute at 4,000 feet above sea level. The fan has been installed within the past few months, and the doors and other details of the ventilation scheme at the Robinson Deep have only recently been adjusted to the requirements of the property.



Fan in the Robinson Deep.

G.E.A. Syndicate, Limited.

The secretary writes:—"Below I beg to give you the assay results of samples obtained from prospecting shafts on this property, in which this company is interested, in German East Africa. The assays have been made by Messrs. Littlejohn and Whitby, Johannesburg: No. 2, 113 dwts.; No. 2a, 80 dwts.; No. 6, 51 dwts. The first two samples are taken over 45 inches and 12 inches respectively, No. 2 at a depth of 30 feet from the surface, and No. 2a at a depth of 20 feet from the surface. The third sample, No. 6, is a sample of outcrop two hundred yards from the prospecting shaft."

THE YEAR WITH "THE JUMPERS."

Question of "Life"—The Treasury Outlook—Benoni-Apex Deal Still Hangs Fire.

The accounts of "The Jumpers" Company show a net working profit for the year (after deduction of the Treasury Gold Mines, Limited's, share of profits) of £13,753 16s. 5d., to which must be added dividends on shareholdings and rebate on gold freights £292 13s. 5d., recovered on account of mining participations previously written off £21 11s. 5d., unappropriated balance as at 31st July, 1911, £8,410 0s. 5d., or a total available amount of £22,508 1s. 8d.; which has been utilised as follows: Set aside as a reserve fund, in terms of the agreement with the Treasury Gold Mines, Ltd., £4,377 19s. 4d.; written off mining participations, £125 12s. 11d.; appropriated on account of loan to the Benoni Consolidated Gold Mines, Ltd., £7,934 8s. 9d.; profits tax, £1,622 16s.; total, £14,060 17s.; leaving a balance to credit of appropriation account of £8,447 4s. 8d., which has been carried forward. The amount of the loan to the Benoni Company was £8,333 6s. 8d., the difference between this sum and the £7,934 8s. 9d. referred to above being accounted for as to £273 5s. by the sale of equipment and as to £125 12s. 11d. by the utilisation of an amount written off in respect of an expenditure incurred in 1911 on mining participations, as detailed in the balance sheet. No change took place during the year under the heading of investments. Investments as at 31st July, 1912, therefore, consisted of: 102,700 £1 shares Benoni Consolidated Gold Mines, Ltd.; 45 £1 shares Geldenhuis Deep, Ltd.; 290 £1 shares Witwatersrand Native Labour Association, Ltd. (12s. per share paid); and 118 £10 shares Rand Mutual Assurance Company, Ltd. The profit from joint working operations amounted to £20,902 1s., out of which the sum of £7,148 4s. 7d. was handed over to the Treasury Gold Mines, Ltd., in settlement of their share of the profit, leaving a balance in favour of this company of £13,753 16s. 5d., from which, however, must be deducted a sum of £4,377 19s. 4d. set aside as a reserve fund, so that the net amount available by this company was the sum of £9,375 17s. 1d. No dividend was declared during the year under review. On the other hand, a dividend (No. 27 of 5 per cent.) was declared by the Board on 1st October, 1912. The dividend is payable to shareholders registered in the books of the company on 22nd October, 1912.

General Manager's Report.

The General Manager writes, *inter alia*:—Mine: Underground operations, Jumpers Mine.—Operations underground have been as follows:—In the above mine the extraction of ore has been carried on in the Main Reef at Nos. 3 to 8 levels (inclusive), Main Reef Leader at Nos. 2 to 10 levels (inclusive), South Reef at Nos. 2 to 10 levels (inclusive) and New South Reef at Nos. 2, 3 and 4 levels. From the places mentioned 32,744 tons of ore have been sent to sorting station, of which 13,309 tons (40.646 per cent.) were from Main Reef; 10,052 tons (30.699 per cent.) were from Main Reef Leader; 7,581 tons (23.152 per cent.) were from South Reef; 1,802 tons (5.503 per cent.) were from New South Reef; making a total of 32,744 tons. Development work has been carried on at Nos. 3, 4, 5, 7, 8 and 9 levels in the central and western sections of the mine. The aggregate footage amounted to 1,054 feet. Treasury Mine.—Operations underground have been as follows:—In the above mine the extraction of ore at No. 1 shaft has been carried on from Nos. 1 to 13 levels (inclusive), and at No. 2 shaft from the first to the bottom level. From the places mentioned 88,620 tons of ore have been sent to the sorting station, of which 51,716 tons (58.357 per cent.) were from Main Reef; 10,893 tons (12.292 per cent.) were from Main Reef Leader; 26,011 (29.351 per cent.) were from South Reef; making a total of 88,620 tons. The total quantity of ore sent to the sorting station from both mines equals 121,364 tons. Development work has been carried on at Nos. 12 and 13 levels of No. 1 shaft, and also at Nos. 1 and 2 levels of No. 2 shaft. The aggregate footage amounted to 1,610 feet. In addition to the above, 350 feet of old drives have been reopened and retimbered. Underground sorting: The number of tons mined during the year was 169,114 tons, of which 47,750 tons, equal to 28.235 per cent., were sorted out in the mine, leaving 121,364 tons which were hauled and sent to the sorting station.

Summary of Profit for the Year.—From mine, £16,107 10s. 0d., equal to 2s. 11.731d. per ton of mine ore. From accumulated slimes, £4,794 11s. 0d., equal to 4s. 11.523d. per ton of accumulated slimes treated. Total, £20,902 1s. 0d.

Ore Reserves.—Jumpers and Treasury Mines: The following is my estimate of the payable ore at present in sight in both mines:—Main Reef, 16,765 tons; Main Reef Leader, 7,965 tons; South Reef, 7,830 tons; New South Reef, 400 tons; total, 32,960 tons. Accumulated sands and slimes: In consequence of the amount of worthless material overlying a large quantity of the slimes remaining, and also on account of the irregular nature of the floor of the dam, it is impossible to state accurately the tonnage remaining for treatment, but I am of opinion that there are at least 10,000 tons yet to be treated. Waste dump: It is estimated that from 3,000 to 4,000 tons of payable ore will yet be obtained from waste dumps.

General.—The surface in the vicinity of the Treasury No. 1 shaft is slowly subsiding, but the shaft is in good order. The east shaft of the Jumpers mine has recently required constant attention on account of a movement of the hanging-wall country. The underground workings throughout are in good working order.

S.W. Diamond Fields.

SEPTEMBER MONTH'S RETURNS.

The returns from the various diggings throughout the South-Western Transvaal show a falling-off compared with August of 1,149¼ carats and £6,266 2s. in value, but the month's total is nevertheless ahead of April, May, June and July. A summary of the returns for September is as follows: Bloemhof, 1,215⅝ carats, value £6,628 19s. 6d.; Pan-fontein, 817¾ carats, value £4,049 7s. 6d.; Mooifontein, 779¼ carats, value £3,910 8s. 6d.; Christiana, 410⅞ carats, value £2,809 2s. 6d.; London, 414¾ carats, value £2,223 12s. 6d.; Rietput, 367 carats, value £2,084 10s.; Blesbokfontein, 417½ carats, value £2,065 13s.; Weltevreden, 279 carats, value £1,346 18s. 6d.; Kuilfontein, 266¼ carats, value £1,111; Grootdoorns, 116¼ carats, value £562 10s.; Koppiesvlei, 114¼ carats, value £517; Maroetjesfontein, 102¼ carats, value £533; Koksrust, 117⅞ carats, value £514 15s.; Goedgenoeg, 87¾ carats, value £482 2s. 6d.; Bloemheuvel, 55 carats, value £336; Modderkraal, 44¼ carats, value £315 15s.; Kareepan, 33¼ carats, value £186 10s.; Avondster, 40⅜ carats, value £177 12s. 6d.; Kromellenboog, 45¾ carats, value £176 17s. 6d.; Wolvenspruit, 5¼ carats, value £90; Boschpan, 16 carats, value £62; Goedehoop, 9½ carats, value £51 15s.; Dievedraai, 4 carats, value £40; Doornbult, 9⅞ carats, value £37 10s.; Witgatboom, 6 carats, value £33 10s.; Commissie Rust, 5⅜ carats, value £28; Zoutpan, 7 carats, value £22 7s. 6d.; Rooikraal, 5¼ carats, value £20 15s.; Van Zyl's Drift, 3¼ carats, value £16; Schweizer-Reneke, 2 carats, value £12 10s.; Middlebosch, 1¼ carats, value £7 10s.; Cawood's Hope, 1⅜ carats, value £6 15s.; Grootpoort, 2 carats, value £5; total, 5,833⅝ carats, value £30,198 7s. The returns for the nine months of 1912 are as follow:—

	Carats.	*Value.*
January	6,265⅜	£32,026 3 0
February	7,501⅝	34,997 17 6
March	7,874½	37,352 16 9
April	5,904½	26,181 7 0
May	6,693¾	29,000 10 0
June	6,180⅞	26,730 0 0
July	5,868	28,618 1 6
August	7,282⅞	36,764 9 0
September	5,833⅝	30,198 7 0
	59,301⅞	£282,269 11 9

Our last issue contained the second portion of an article on "Trackless Trams," taken over from the *S.A. Railway Magazine*. We regret that the name of the latter was inadvertently omitted.

THE TIN INDUSTRY.

Zaaiplaats and Rooiberg Annual Meetings— The Fissure Theory at Zaaiplaats—A Drastic Method of Recording Ore Reserves.

The important events of the week with regard to the Transvaal tin industry have been the annual meetings of the Zaaiplaats and Rooiberg companies. At the Zaaiplaats meeting, the Chairman, Mr. D. M. Munro, in moving the adoption of the report and accounts for the year ended July 31st last, said, *inter alia*, that the revenue of the company for the past year, as shown by the accounts, amounted to £159,784 11s. 9d., and the expenses to £51,119 14s. 8d., leaving a surplus of £108,364 17s. 1d., to which amount the balance of £27,675 10s. 11d. brought forward from the previous year must be added, making a total of £136,040 8s. Out of this four quarterly dividends of 50 per cent., 50 per cent., 25 per cent. and 25 per cent. had been declared, absorbing £90,000, and the other items to be deducted include Government royalty for 1911, directors' and auditors' fees, development redemption, and £14,397 2s. profits reinvested in the mine, leaving a balance of £10,873 11s. 7d. to be carried forward, out of which the Government royalty for the current year has to be paid. Since the inception of the company in 1908 the total dividends paid to shareholders amounted to £249,000, equal to a return of 115 per cent. on the capital of the company. In addition to this an amount of £38,000 has been allocated out of profits and reinvested in buildings, machinery, plant, etc. Expenditure on capital account during the year was abnormally high, totalling £33,437 10s., of which £15,849 13s. 11d. was written off against the profits earned during the year. The balance of this capital expenditure, together with an adjustment of £1,600 from the previous year, will have to be provided for out of future profits. It is estimated that a further £7,200 will be required to be spent on capital account, mainly in connection with the new slimes plant, but beyond this the directors do not anticipate any large capital expenditure during the present financial year. Including this amount of £7,200, and £38,000 as stated above which has already been provided out of profits and written off, the total expenditure on capital account since the company was floated amounts to a total of £133,498. This has provided the company with an up-to-date mill of 15 stamps, concentrating plant, subsidiary slimes plant, power station, compressor station, calcining plant, Sterk River pumping station and pipe lines, reservoirs, dams, all mine development and shaft sinking, etc. The company started this year with a debit of £19,200 expended on additions to plant, etc., and adding to this the further estimated expenditure of £7,200 already referred to, it will be seen that £26,400 has to be provided to cover this liability. In the past it has been the policy of the board to meet expenditure of this nature out of profits and that policy will be continued. It is hoped that by the end of January next the amount of this debt should be almost liquidated. If the bulk of the debt is liquidated by the end of January next, the major portion of the profits earned after that date should be available for distribution. During the year 29,330 tons of ore were crushed, yielding 1,647 tons of concentrates of an average value of 67 per cent. tin. Now that a calcining furnace has been erected, the grade of the concentrates, which had fallen off as a result of impurities in the ore, is improving, and it is hoped to bring it back to the old figure of 70 per cent.

The Zaaiplaats Reserves.

In a report by the manager, Mr. Gilbertson, which was read to the meeting, some interesting information is given with regard to the ore reserves. It appears that a breaking up and loss in ore values have occurred in the sections Nos. 5 and 6, and the manager attributes this to the influence of a very strong fissure, which can be traced through these sections. The fissure itself discloses in places ore of a payable nature, and a thorough investigation of the fissure is recommended, as it may have an important bearing on the future of the property. It will be remembered that Dr Merensky, when consulting engineer to the company, laid great stress on the existence and influence of a system of fissures, and during the temporary management of Mr. C. Fred Thomas, as *locum tenens*, a vertical shaft was begun which was intended to facilitate development in accordance with the theory evolved in connection with these more or less parallel fissures. The shaft was discontinued by Mr G. Furner, the late manager, who, we believe, did not support the fissure theory. It is curious to find this line of thought coming to the front again, and it will be interesting to follow the evidence afforded by the investigation along the fissure plane, which is referred to in Mr. Gilbertson's report.

An important statement is made by the manager regard to the ore reserves, wherein he confirms the opinion already expressed in the directors' report—that the amount of ore reserves can only be expressed in terms of the number of tons broken and dumped. He further recommends, to enable shareholders to get an idea of the development of the mine from time to time, that the position be expressed "in terms of the superficial area of payable faces exposed, together with the average value." This method will in future be adopted in all issued statements and reports. "I would like shareholders to bear in mind," remarked Mr. Munro, "that we are dealing with a peculiar, and in many respects unique, ore deposit, and we have only our past experience of the property to guide us as to its possible future resources. Tin deposits are proverbially of an erratic nature, and we have also to deal with a fluctuating market in the disposal of our tin product. Naturally, every endeavour is made to keep the profits as regular as possible without treating the mine unfairly, but shareholders must expect, taking into consideration the above conditions, certain fluctuations in the monthly profits. The policy aimed at by your board and advocated by the manager will therefore be to open up ore in as many faces as possible in excess of those required to keep the mill supplied, so that in the event of any of the faces suddenly becoming impoverished there will be others to fall back upon, and endeavour, within certain limits, to maintain a more or less regular output." In the report of Mr. C. Fred Thomas, for the year ended July 31st, 1911, the estimated ore in sight and anticipated ore from pipes Nos. 4, 5, 6 and 13, not including off-shoots, was 81,000 tons, while the ore at surface was calculated at 18,000 tons, and the alluvial ground at 15,000, a total of 114,000 tons, with an estimated recoverable value of 1·5 per cent. metallic tin. The tailings and slime were not included in the figures, but were mentioned as a valuable asset. At the end of July 31st, 1912, Mr. Geo. Furner gave the total ore lying at surface and actually blocked out, not including "anticipated" ore, at approximately 24,622 tons, with a value of 3·42 per cent. in tin. As 29,330 tons of ore had been crushed, there should have been, on the 1911 estimate, without development, approximately 70,000 tons instead of 24,622, and this discrepancy was explained as being due to the fact that "anticipated" tonnage was not taken into consideration.

A still more cautious method of recording the ore reserve position, it will be observed, is outlined in the chairman's speech just quoted. No estimate of tonnage would be published, but the manager recommends that only the area of the payable faces exposed, together with their average value, should be declared. A more conservative and guarded way of expressing the condition of things could not well be adopted.

It is gratifying to learn that the very urgent problem of an adequate water supply is receiving the serious attention of the board. The new slime plant, to treat accumulated products, is practically completed, and awaits only the

neeessary improvement in the water supply in order to begin operations.

Rooiberg.

One of the most important matters to be considered in any review of the position of the Rooiberg mine is, of course, that of the development disclosures, and upon this point the chairman, Mr. Dalrymple, had much of a reassuring nature to say to the shareholders at the last annual meeting of the company on the 30th ult.:—"Generally speaking," he remarked, "it may be said with regard to development in the mine proper that no very sensational discoveries have marked the year's work, while, on the other hand, we have no reason to be discouraged. The east end old workings continue to give satisfactory results, and as regards exploration and prospecting, the large pocket of high-grade ore located in No. 15 trench, which, on reference to the map accompanying the report, you will see is in the neighbourhood of the old camp workings, is a most striking feature. I need hardly say that when good values are discovered your manager loses no time in following them up. In the month of March, 1912, the new compressor to which I referred last year was brought into commission, and from then to the end of September 6,321 feet of development have been done, or an average of 903 feet per month. The necessity of pushing on with development in the mine is kept well before your directors, who also fully realise the importance of thoroughly exploring the outside areas of your property; with this in view, prospectors have been employed continuously throughout the year, and the discoveries made, though not conclusive, lead the Board to hope that further workings of considerable extent may be located in other parts of the property." It is not proposed to hasten the work of development in depth. A large reserve of ore is in front of the mill, and in order to keep exploratory expenditure within reasonable limits the ground below the main shaft, which is at the 310 ft. level, will be opened up by means of a winze and drives. The evidence obtained in this work will enable the Board to decide whether it is desirable to continue the main shaft. In regard to the character of the ore body below the 310 ft. level, Mr. Dalrymple said:—"As yet I regret that we have not definitely established the permanence of the mine in depth, though in our 310 feet level, which is the deepest level in which we are at present working, I am glad to say that latest advices from the mine give payable values in the drive north of the Union lode, the results for the last four weeks being as follows:—Week ended 29th September, 1·2 per cent. metallic tin over 21 inches; week ended 6th October, 1·2 per cent. metallic tin over 21 inches; week ended 13th October, 3·0 per cent. metallic tin over 21 inches; week ended 20th October, 5 per cent. metallic tin over 23 inches."

The New Plant.

The new tin-dressing plant came into operation in May last, and of the tonnage treated 2,504 tons, including 789 tons accumulated middlings and slimes, were put through this plant. The plant is working very satisfactorily, and in it, the chairman considers, the company may lay claim to possessing the most modern tin-dressing plant in these or any other fields. From the first day on which it was put into commission no difficulty, either mechanical or metallurgical, has been experienced. The extraction obtained by the new plant has been as follows:—July, 67·03 per cent.; August, 70·26 per cent.; September, 71·19 per cent. For the month of September, while the average extraction obtained was 71·19 per cent., that from the mine ore was estimated at about 77 per cent., while that from accumulated middlings and slimes was about 60 per cent. A lower extraction in the latter case is only to be expected, as the value of this pulp is much less than that of the original ore from the mine. The treatment of the accumulations will thus tend to obscure the average figures, both as regards extraction and ebsts, but arrangements are being made to keep a separate analysis of these so that shareholders will be able to see at a glance the results of the treatment of both current ore and that which is being retreated. Satisfactory as are the improved extractions obtained, it is not intended that they shall remain at the present figure, and the efforts of the management are continually directed towards further improvement. "As, however, there would appear to be a feeling that the money spent on the new equipment should not have been so spent," Mr. Dalrymple said, "I should like to mention to those shareholders who feel that in erecting a modern plant we have exceeded the requirements of the company, that the directors at least have every hope that this is not an ephemeral concern, but one which will stand the test of time and continue to distribute dividends for many years to come. On the matter of extraction alone, it is noteworthy that while the old plant obtained at its best an extraction of about 58 per cent., the new plant on current ore has already reached 77 per cent. The difference of 19 per cent. between these two figures on the ore treated for last year represents some £35,000 additional revenue recoverable through the new plant. I do not think that I could give a more convincing figure to those who are inclined to consider that the money spent on this plant was not justified. This year the tonnage should be considerably augmented, and the extraction further improved, and I think we may therefore safely estimate that the saving on the year's work attributable directly to the new plant will be over £40,000, or about two-thirds of the entire cost of the new equipment and dam."

Future Dividends.

The profits for July, August, and September have amounted to about £17,000. Provided conditions remain favourable, it seems safe to expect a similar profit for the next three months, and, making allowance for capital expenditure and the building up of a reserve, the chairman considers it may be possible to make a distribution of some 12½ per cent. at the end of the year. The labour problem presents no difficulties, and the water supply during the year has met requirements, the quantity in the new dam at the end of September being 3,610,000 gallons, which, with the supply from boreholes, will be enough to carry the company through to the rainy season. Working costs, it is expected, will be reduced, and generally, Mr. Dalrymple, if tin prices continue satisfactory, foresees an era of prosperity for the Rooiberg mine.

De Beers and Jagers.

"Truth" to hand by the mail says:—"Rather more than a month ago my readers were told that usually well-informed people expected the distribution due to be announced in September on De Beers Deferred would be 10s. per share. During the past week the directors of this company, the market in whose shares has been enjoying a good deal of activity the last few months, have declared a final bonus of 2s. 6d. per deferred share in respect of the year ended June 30 last, and an interim dividend on account of the current financial year of 7s. 6d. per share, so that the forecast I have just recalled has proved correct. Another distribution is expected to be declared in December, the directors having announced some time ago that they had decided to revert to the old practice of declaring the half yearly distributions in June and December. This September declaration was promised in order that the transition period might be bridged over. A dividend has also been announced on 'Jagers' (as the shares of the New Jagersfontein Mining Company are known in the market) during the past week, the amount in this case being 4s. per share for the half-year ended the 30th ultimo. The rate is the same as for the preceding half-year, but prior to that it may be remembered the company distributed 6s. per share. The 'cut' in the dividend last March, which materially affected the market in the shares, was understood to be due to the increase in costs attendant upon underground instead of open-cut working. At the meeting at Kimberley in June the Chairman said that enormous sums, provided out of profits, had been spent in preparation for the underground system. This policy must benefit the proprietors in the long run, though when the rate of distributions will be increased it is impossible to say. Although Jagers are down below £7 again, the yield on the basis of current dividends is only 6 per cent."

SAND-FILLING ON THE RAND.

The System Adopted at the Cinderella—What the Method Costs.

[By R. E. Sawyer, A.I.M.M.]

The method of supplying dry sand to a shaft for filling purposes as here described is actually in operation, and consequently may be considered to have passed out of the experimental stage. It was the invention of Mr. Girdler-Brown, general manager of the Cinderella Consolidated Mine, in the Transvaal, under whose direction the author installed and subsequently operated the plant. The system adopted renders the operation of sand filling at great depths, when of course it is most needed, a matter of comparative simplicity, though success was not achieved without considerable thought and much hard work, accompanied by many reverses. In first cost it compares favourably with any other method, no de-watering cones or neutralization process being necessary, and it shows to the greatest advantage when employed in shafts of great depth and in circumstances where continuous filling is not necessary, as interruptions are almost certain to occur from time to time in wet weather, due to an excess of moisture in the sand. The sand used should not contain more than from 5 per cent. to 6 per cent. of moisture, and should have been exposed to the sun and air for at least two days before use; it will then be practically free from cyanide and neutral in character. Sand in this condition may be found at the foot of any working dump during fairly dry weather. Sand taken direct from the cyanide tanks was tried, but even after it had been treated with potassium permanganate, considerable quantities of cyanogen were evolved when the sand became mixed with ordinary acid mine water. This action was, however, entirely obviated by exposing the sand to the sun and air, as already mentioned. The plant was originally laid out with a view to adopting the usual practice in sand filling of running the sand down the shaft already mixed with water, but this idea was found to be impracticable, owing chiefly to the excessive wear of the pipes caused by the great depth through which the mixed sand fell, and the cost of pumping entailed. When the column first installed was worn out, it was decided to replace this by a wooden box launder down which the sand should fall unmixed with water. This launder measured 12in. by 11in. in cross section, inside measurement, and its cost was approximately 2s. 6d. per running foot. Observation doors were cut at distances of about 100 feet. The piping and launder from the surface bins were replaced by a belt which conveyed the sand to the top of the box launder. It was found that sand containing no more than 4 per cent. of mosture would run freely from the bins to the belt without handling. On arriving at the head of the launder, the sand falls down the box on to a steeply-inclined iron plate on which a stream of water is made to play. The plate, by the way, should be provided with a liner of the hardest white cast iron to counteract the excessive wear at that point. On being mixed, the sand and water flow into a steeply inclined launder where they undergo further mixture before being conveyed by means of pipes or other launders to the part of the mine requiring treatment. The effective capacity of the plant is controlled by the quantity of water available, as it is found that the delivery of the sand through the vertical box is practically without limit. In the plant now installed, experience shows that the box launder has not appreciably worn, a reason for this being the conduct of the sand which travels normally down the centre of the box, with little or no impingement on the side. This was proved by examination through the observation doors already alluded to; the sand could be seen falling in a steady stream; the bare hand could be held in the corners of the box, but it was difficult to hold an iron bar across the falling sand in the middle of the launder, and the metal was quickly polished by the rapidly-moving particles. It was noticed that the falling stream of sand created a suction of air down the launder; thus, on opening an observation door no sand escaped, but air was drawn in. From time to time trouble was caused by the sand containing too great a percentage of moisture. This caused it to adhere to the sides of the launder in gradually increasing quantities until at last the flow was seriously impeded. Under such circumstances, the remedy was to sluice out the box with water from the surface until the adhering sand was washed away. In this connection, experiments were conducted with a view to determining the maximum percentage of moisture which would allow of the sand being run down "dry." The following were the results obtained: From 0 to 5 per cent. of moisture allowed the sand to fall freely, leaving the sides of the box clear and dry. From 5 to 7 per cent. of moisture did not affect the fall, provided that the sides of the box were themselves dry. From 7 to 9 per cent. of moisture caused the sand gradually to begin adhering to the sides of the launder, where it accumulated slowly. From 9 per cent. upwards of moisture caused a rapid accumulation of sand along the sides of the launder. These results were largely influenced, it was found, by the proportion of slime contained in the sand. The liability of the sand to choke the launder under certain atmospheric conditions renders it essential to have an efficient bell-signalling service between the mining point and the surface bins, as the supply of sand should be regulated in proportion to the quantity of water available for service. Thus, if the sand is supplied too quickly, it has a tendency to pile up at the bottom of the box launder and choke it, as the water is not in that case sufficient to sluice it away. On the other hand, if the sand appears to be coming down slowly, it may be that a certain proportion is sticking to the sides of the launder, on account of there being too great a percentage of moisture. When this is found to be the case, sluicing must be resorted to, as mentioned previously, and must be repeated from time to time as the occasion warrants. Determined attempts were made to use current sands, direct from the tanks, with a view to saving transport from the dump. It was found, however, that this sand, which contains from 12 to 15 per cent. of moisture, gave constant trouble by adhering to the sides of the launder and forming accumulations. These accumulations happened at various points down the launder, but principally at one point about 600 feet down. Jets of compressed air were introduced with a view to increasing the velocity of the falling stream, and thus preventing the adhesion of the sand. The box launder was furthermore connected with the intake of a ventilating fan near the bottom, and to a Roots blower at the top, the idea being to dry the sides of the box, and thus prevent the sand from sticking. These devices undoubtedly permitted the use of damper sand than could otherwise have been employed, but they were practically of no avail when the sand contained more than 10 per cent. of moisture, and were consequently abandoned after prolonged trials. Unfortunately, it was found necessary to place the box launder in the upcast side of the shaft and in the same compartment with the pump column. Consequently, the box was always wet on the outside, and the water constantly reached the interior. With sand containing no more than 4 per cent. of moisture this would not give rise to any considerable trouble, especially if the launder has its interior surface planed smooth, and the outside tarred. But in order to deal with sand containing up to a maximum of, say, 8 per cent. of moisture, the launder should be placed

* A paper presented at a meeting of the Institution of Mining and Metallurgy.

in the driest compartment available on the downcast side. There is actually a saving in the quantity of water requiring to be pumped out of the mine when the sand-filling plant is in operation. The sand in the stope probably retains at least 10 per cent. of moisture. The sand as sent down contains on an average 3 per cent., and it is calculated that in the course of a good day's run, the water saved from the necessity of being pumped 4,000 feet to the surface will amount to something like 8,000 gallons. The labour required to operate the plant is small. A learner in charge of three boys will look after the belt and surface bins, and the underground part, including the mixing point and the stope to be filled, is in charge of a timberman. The sand is brought from the dump to the surface bins by means of mechanical haulage, the actual shovelling and tipping necessary being done by unskilled labour. Running cost per shift.—Surface: 25 unskilled labourers at 1s. 6d., 37s. 6d.; 1 white boy, 5s.; 3 natives at 1s. 6d.; 4s. 6d. Underground: 1 timberman, 20s.; 3 boys at 2s., 6s.; total, 73s. Power for haulage, belt, pump: 23 kilowatts per hour at 0·5617d., 13s.; total, 86s. Taking an average of 400 tons per shift, the cost works out at 2·58d. per ton.

Blaauwbosch Diamonds.

Washing returns for October, 1912:—9,851 loads treated; 2,933 carats recovered; or 29·77 carats per 100 loads.

Manicaland Gold Output.

The mineral output of the territory of Companhia de Mocambique (Manicaland) for the month of September, 1912, was as follows:—Reef: Mill, gold won (fine gold), 142 ozs. 13 dwts. 10 grs.; tons crushed, 788; value, £599 2s. 10d. Note.—Excess on declared production July-August: Fine gold, 5 ozs. 17 dwts.; value, £24 10s. 11d.

THE POSITION OF THE GOVERNMENT MINING AREAS (MODDERFONTEIN) CONSOLIDATED, LTD.

A Quarter's Development—Improving Tendency.

The report of the directors of the Government Gold Mining Areas (Modderfontein) Consolidated, Ltd., for the quarter ended 30th September, 1912, states:—Shaft Sinking.—The north-east shaft was sunk 353 feet to a total depth of 2,433 feet. The shaft continued in quartzite to a depth of 2,273 feet, when the Main Reef series was intersected. The reef, which dipped 11 degrees to the south, was dislocated by a fault which threw it down a distance of 11 feet. Only a small portion of reef was exposed north of the fault, and this assayed 1·8 dwts. over 19 inches. On the south side of the fault the average assay value was 9·5 dwts. over 21 inches; the average for the whole of the reef exposed being 7·7 dwts. over 20·5 inches. The shaft was continued in the footwall slates to a total depth of 2,433 feet in order to provide for a sump and ore bin. The north-west shaft was completed early in July. The total depth of the shaft is 2,538 feet. The south-east shaft was sunk 268 feet to a total depth of 2,748 feet. The shaft was in amygdaloidal diabase to a depth of 2,577 feet, when it passed into quartzite. A dyke, 6 feet in thickness, was encountered at 2,590 feet, and at 2,600 feet, 6 feet of reef matter was intersected. Below this the formation consisted of quartzite to 2,730 feet, when a band of slate, 3 feet in thickness, was passed through. The underlying formation consisted of quartzite. A fault came in at the north end of the shaft at 2,560 feet, and continued to 2,658 feet, when it passed out at the south end. This fault was responsible for a considerable amount of delay in sinking, as the water followed the fault down, and continued in the bottom of the shaft throughout this distance. The south-west shaft was sunk 584 feet to a total depth of 2,135 feet. The formation consisted of quartzite to a depth of 1,617 feet, when the shaft passed into slate, which continued to a depth of 1,686 feet. The shaft was in quartzite from 1,686 feet to 1,750 feet, when slate was again encountered, and continued to a depth of 2,018 feet. The underlying formation consisted of quartzite. A piece of quartzite was faulted into the shaft at about 1,800 feet, and displaced a portion of the slate for a distance of about 60 feet.

Development.—At the north-west shaft, the cutting of a station and ore-bin was proceeded with immediately after the sinking of the shaft was completed, and it was found possible to carry out a small amount of development on reef. The following are the particulars of the work accomplished to date:—East drive, 190 feet; reef width, 8·4 inches; value, 13·9 dwts. West drive, 170 feet; reef width, 19·2 inches; value, 13·2 dwts. East rise, 190 feet; reef width, 15·0 inches; value, 10·1 dwts. The values in the rise were low for some distance, but for the last 40 feet the reef averaged 19·4 dwts. over 12·5 inches. At the north-east shaft the cutting of a station and ore-bin are in hand.

Surface Equipment.—The bridge over the Witbank line has been completed, and the sidings to the north shafts are now open for traffic. Good progress has been made with the erection of the manager's house and general offices.

General.—Native labour has not been so plentiful during the past three months, and this has slightly interfered with the progress of work underground.

THE PRESENT POSITION OF ZAAIPLAATS.

The Mine Manager's Report—Exhaustive Review of Underground Conditions—Developments Justify Confidence in the Future.

THE following report of Mr. Gilbertson, the recently appointed manager of the Zaaiplaats Tin Mining Company, Ltd., was presented at the annual meeting on Tuesday, the 29th inst. One gathers from it that a policy of more extensive exploration and development than has hitherto been considered necessary will henceforward be adopted. In stating that "the encouraging developments underground justify confidence in the future of your property as a leading tin producer," he is merely adding emphasis to an opinion which is widely held by those who have had an opportunity of examining the mine from time to time:—

Gentlemen,—I beg to submit a report on your property dealing mainly with the resources and future prospects. I have endeavoured, as briefly as possible, to indicate the true position and the steps which are being, or will be, taken to place the mine on the soundest possible footing. Among the ore bodies hitherto discovered on your property, a few, namely, Nos. 5, 6, and 13, became large steady producers, and with their expansion in size and value the smaller and less attractive workings were abandoned. The pipes referred to were large and rich enough to satisfy all requirements, and till quite recently betrayed no sign of exhaustion. Of late, however, a great change has been taking place, and at the present time the values of these bodies are at their lowest ebb.

No. 5 Section.—This pipe, a very strong one, formed the main body into which a number of adjacent bodies merged. After a brilliant history, during portion of which it was supposed to have formed on a sheet-like zone carrying payable values, the pipe broke up into numerous small branches, the largest running into No. 6 pipe. The branches referred to appear to be enrichments on detached pegmatitic seams associated with a strong fissure running through this section. These minor bodies, together with a few rich and strong branches in the upper section of No. 5, form the only source of ore production.

No. 6 Section.—After many turns this body split into two branches, Nos. 6e and 6w, each of great size and value. No. 6e petered out badly, leaving a small indication in the roof which has since led on to a tin-bearing pegmatitic seam. No. 6w contained down on its old course till striking an open water-bearing fissure, beneath which the body is different in character and has a tendency to branch. The ore being worked in No. 6 is low grade.

No. 13 Section.—The behaviour of this ore body has been somewhat different from that of the others. The ore lies mainly in a series of climbers extending along a gently sloping line parallel to the north-east boundary of your property. In the upper section of the pipe the vagaries of the ore channel did not seriously affect the values, but as greater depth was attained the dividing "necks" of the chambers became the repositories of impoverished ore, this peculiarity being more pronounced in each succeeding case. The present face of No. 13 is in one of these "necks," and the ore, as in the case of No. 6w, less than 1 per cent. in value.

No. 6 Roodepoort.—The large bodies mined soon after the discovery of the ore deposit were merely pockets off a well-developed fissure running down the hillside. Only one patch of ore was found to leave the chambers, and this is now being raised on. Two other ore bodies are being worked a little above No. 6 main entrance. The average value of the ore is about 2½ per cent.

No. 2 Section.—A small pipe of medium grade is being worked. The ore body has a tendency to split, and at present is in four small branches. The average grade is fair, and, on the whole, this is a healthy section.

Camp Workings.—An enrichment on a seam dipping under and with the pegmatite forms the payable ore body. This has never been an important producer and is now very poor.

No. 4 Roodepoort.—The T.C.L. Co. worked this deposit with great success and left behind a promising show of ore. The body is sheet like in shape and carries fair values. The face is roughly 100ft. from the Zaaiplaats boundary. The above are working places from which the mill is fed. Owing to the low average grade for some time past, the rich reserves of ore at the entrance to No. 13 have been depleted to maintain the output. These reserves are not quite exhausted, but are so far reduced that further attack on them would only enable the grade to be maintained for a short period. The state of the mine at present renders unadvisable any attempt to force the higher grade ore bodies, and I have therefore concentrated work on the worst faces in the hope of "nursing" the mine up to a better grade. The low grade of the ore thus produced can, I think, be compensated for by the treatment of certain rich dumps of "seconds" which were accumulated when the concentrating plant was inadequate to deal with the very rich ore being milled. I believe that the respite thus afforded will enable me to provide for the maintenance of a steady and satisfactory output derived solely from mine ore.

Future Prospects.—As regards the future prospects of the mine, I would mention some of the encouraging points I have observed. Dealing in the first place with Nos. 3 and 6 I cannot adopt the view that a general petering is in progress or that the ore bodies are in the way of becoming too poor or too small to work at a profit. I would say rather that some disturbing influence is to be looked for, and this is plainly to be found in the strong fissure referred to as having cut off the good values in No. 6. An examination of this fissure has disclosed the fact that payable ore is deposited within its walls. The quantity of ore in sight is of minor importance compared with the effect of this fissure on Nos. 5 and 6 pipes. The loss of value and general break up of the ore bodies demands, at once, a thorough investigation of the fissure, and the presence of payable ore leads one to assume that the tin bearing gases were active in forming ore bodies other than the regular pipes. The fissure has been traced through the No. 5 branches, which in every case were enriched at the intersection with it. I need scarcely point out that, should appreciable courses of ore be found on this plane, a new era in the exploitation of Zaaiplaats ore bodies will commence. The old chambers and pipes are being cleaned down for sampling, and in addition to some thousands of tons of rich fines and accumulations thus recovered, there is every likelihood of revealing many more branch occurrences which were, no doubt, overlooked or neglected when rich ore in large quantities was easily won from the main face. Though the fossicking in worked out sections may lead us on to large bodies as important as the original face, this is a development I would not care to predict. The cause of the change in No. 13 is not plain. The change has really been a gradual one after the first few hundred feet, the fact not being emphasised till the splitting of No. 6 rendered No. 13 the mainstay of the mine. Apart from the sudden breaks which have occurred, I cannot discover serious grounds for assuming that No. 13 has been lost and that the present face is a branch of the main body. As excellent ore was mined a few feet back from the present face, there is no reason to suppose that further enrichments along the ore channel will not be disclosed. The worked-out chambers are being carefully examined for branches or indications of adjacent ore bodies. In the case of Roodepoort No. 6 prospects are exceedingly good. A strong fissure traverses highly altered granite in which the pockets and present faces are situated. I believe that the enrichments which have taken place have been caused by a permanent body, which has not been located. The three faces now working cover a good area on the fissure and are likely to shed some light on the situation. In addition to the workings in active operation a number of abandoned pipes with good prospects exist. These are being cleaned down and sampled. A large amount of ore will be recovered from the foot and sides in addition to the accumulations which are to be found in all old places. I estimate the accumulations and ore left behind at 10,000 tons of good milling grade. The possibility of finding further deposits of ore is limited only by the amount of prospecting done. To ensure the finding of every pipe of which there is a trace on the surface, the kopje must be stripped from top to bottom, as rich alluvial is to be found in every nook and cranny on the hillside. I am of opinion that the cost of this work will be recovered by treatment of the stripped material.

Resources of the Company.—The resources of the company may be summarised as follows: 1. Working faces in ore; 2. Ore left in old sections; 3. Accumulations in old sections; 4. Abandoned faces in ore; 5. Rich alluvial deposits; 6. Residues for retreatment; 7. Dumps of mined ore. The ore reserves of this company can only be expressed in terms of the number of tons broken and dumped. Any attempt at estimation of the ore reserves in situ would be futile in view of the fact that only two linear measurements are available—those of the working face—the payable length of pipe being purely a matter of conjecture. As tonnage figures cannot be given, I would suggest that the position be expressed in terms of the superficial area of payable face exposed, together with the average value. These figures, while liable to fluctuation when derived from a few working faces are the only ones available, and give a true idea of the general condition of the mine at the time of their preparation. Taking into consideration the steadying effect of a large number of faces on figures of this kind, they might be taken as representative of the probable condition some months in advance. The tonnage of (2) and (3) has been given above as not less than 10,000 tons. (5) could be estimated roughly, but even this would entail incursions into the realms of fancy. (6) and (7) are estimated at 60,000 tons and 16,000 tons respectively. In conclusion, I would say that a large tonnage of broken rock and residues (from which a handsome return will be made), and the encouraging developments underground justify confidence in the future of your property as a leading tin producer.

New Modderfontein.

The following is a copy of the cable despatched to the London office on the 29th October, 1912:—"New Modderfontein G.M. Company reef struck at 2,158 feet in Circular Shaft 29th October. At north end of shaft 42 inches of solid reef are exposed. The average value of three check samples taken to-day is 26·9 dwts. over 42 inches. Further values will be published after the reef is exposed all round the shaft."

THE POSITION OF THE KNIGHTS DEEP.

Points from the Annual Reports—Increased Development.

Mr. J. W. Craig, acting superintending engineer of the Knights Deep, Ltd., writes: "As compared with the previous year, the tonnage milled was increased by 32,030 tons, the average grade reduced by 2s. 7·639d. to 4·396 dwts., equal to 18s. 5·119d., and the value of residues by 2·968 to 0·270 dwt., equal to 1s. 1·581d. per ton milled. Working costs, exclusive of expenditure on renewals and replacements of machinery and plant, were 11s. 1·388d. per ton milled, a reduction of 4·203d. as compared with the preceding year, and a further record for the Rand over a whole year's operations. The ore developed in the mine at the 31st July, 1912, is estimated at some 1,477,414 payable milling tons of fully developed ore, of an average assay value of 4·7 dwts., and, in addition, there are some 46,000 tons of partially developed ore of an indicated value of 4·3 dwts. per ton. Exclusive of this reserve tonnage, there are large areas in which enough work has been done to admit of the ore being removed by stoping, but which have not been included in reserve, owing to absence of sufficient information as to value. In fact, the actual development work still to be done in this mine is so small that the cost distributed over the large tonnage still to be milled will probably be about 1d. per ton. The decrease in grade assigned to the fully developed ore reserves is partly accounted for by the slightly lower pay limit consequent upon reduced working costs. The Bastard and other small associated reefs worked under the heading of 'reclamation' have continued to give satisfactory values, and a large tonnage has been mined from them during the year. As predicted in the last annual report, it has proved feasible to break most of this rock with small hammer drills—a considerable saving in native labour and in cost resulting. Seventy stamps have been rented from the Simmer and Jack East, Ltd., as during the previous year."

Mr. G. A. Chalkley, the manager, writes, *inter alia*: Average number of stamps running, 270; tons mined, 751,058; percentage of waste sorted out, 3·11; tons milled, 727,700; days milling, 342·177; tons milled per stamp per day, 7·876; tube mills, average number running, 6; days running, 345·407. The development footage for the year amounted to 1,454 feet, summarised as follows: Driving, 924 feet; raising, 266 feet; winzing, 8 feet; crosscutting, 256 feet. During the year the following additions and improvements were made to the plant: A solution heater has been added to the slime plant; the new 500 volt sub-station has been completed; two staff houses and a pair of semi-detached cottages have been completed; a bolt-cutting machine has been added to our workshop plant; a 50-drill electric-driven compressor has been installed at the Connor shaft; the Connor incline air column has been changed to provide increased air carrying capacity; a new underground water service has been installed; a new native change house has been added, which enables all the mine boys to pass through and bath after coming off shift; the manager's house has been repaired and improved; the alterations to mine signals, to comply with the new Mining Regulations, have been carried out; the construction of the new breaking and sorting plant, steel storage bin, mechanical haulages from the Connor and Robertson shafts and conveyor belt from the crushers to the mill bins, is rapidly approaching completion and should be brought into commission during the first month of the new financial year. Most of our reclamation work is now being done by the hammer type of drill; we are also experimenting with same in stoping. We have been obtaining encouraging results with detachable bits for use in the hammer type of machine. The new underground water service is doing good work, and the expenditure monthly for dust-allaying will be fully justified by the improved health of the underground employees."

Nationalization of Mines.

PROPOSALS OF THE MINERS' FEDERATION.

The principal business at the annual conference of the Miners' Federation of Great Britain at Swansea was the consideration in private of the draft of a Bill "to nationalise the coal mines and minerals of the United Kingdom and to provide for the national distribution of coal." The Bill proposes that the King shall appoint a Minister of Mines, who shall receive a salary of £2,000 a year, and hold office during His Majesty's pleasure. The Minister may be a member of the House of Commons. On and after the appointed day every colliery and coal mine, with all coke ovens, coal washeries, railway rolling stock, workmen's dwellings, and other property belonging to the colliery owners, and all coal at the mines shall be vested in and held by the Minister of Mines in his corporate capacity and his successors. The Minister shall buy the mines, the purchase price of which shall be assessed by ten paid Commissioners, of whom three shall be nominated by the Mining Association of Great Britain, three by the Miners' Federation, and two by the Trades Union Congress. If after twelve months a majority of the Commissioners fail to agree as to the price of a particular mine, their chairman, who is to be appointed by the King, may himself fix the price; but ordinarily the Commissioners' finding shall be final and binding on all parties. A valuation of all coal mines is first to be made, showing the total ascertained value of each mine, and its ungotten minerals and other profitable rights, and its total ascertained value exclusive of such minerals and rights. The purchase price of the mine shall be computed on the basis of the average annual number of tons actually raised during the five preceding years, providing that in no case shall the maximum purchase price be taken to be more than the following: When 100,000 tons or less have been raised per annum on the average during the five preceding years, 12s. a ton. When more than 100,000 tons have been raised per annum on the average during the five preceding years, 10s. a ton. The Commissioners are also to take into consideration, in fixing the price, the gross and net profits of the mine during the five preceding years, and the amounts set aside for depreciation, renewals, or developments. The value of any minerals or right to work minerals or mineral way leave, other than a surface way leave, shall not be taken into account in computing the price, and for all of these no compensation shall be paid. The Minister shall pay the purchase price in Coal Mines purchase stock to those who, in the Commissioners' opinion, have established their title to it. An appeal shall lie to the High Court from their decision as to such title, but for no other purpose. This stock shall consist of "perpetual annuities" yielding dividends at 3 per cent. on the nominal amount of capital. After twenty years, but not before, the stock shall be redeemable at par. The Minister for Mines may open and work coal mines and carry on coal mining in all its branches, and may compulsorily purchase land or acquire such rights or easements over land as he may require. The workers in any national coal mine may form a trade union, and may take civil or political action as if they were not employed by the Crown. The Minister must ensure a sufficient supply of coal at reasonable prices throughout the United Kingdom, and the railway companies must provide him with such facilities for the conveyance of coal as he may deem necessary at rates not greater than they are now entitled to charge. The sale of coal by private persons is forbidden under a penalty not exceeding £20 for every ton stored, or sold, or attempted to be sold. The Bill was discussed at considerable length, and ultimately its principles were unanimously approved. The conference agreed to ask the Labour Party, at its annual conference in Glasgow in January, officially to adopt the Bill.

Rhodesian Section.

LATEST MINING NEWS.

The September Output—The R.N.L.B—Tanganyika Coal—Planet-Arcturus Values—Connemara Developments—Bechuanaland Copper—The Susanna—The Turkois Extensions—Globe and Phoenix Developments.

The gold output of Southern Rhodesia for the month of September has been declared at 54,773 ozs., value £230,573, as compared with 56,824 ozs., value £239,077, for August. Other minerals accounted for a return of the value of £11,124, as against £26,834. The complete figures for the two months read as under:—

	August.		September.
Gold	£239,077	.....	£230,573
Silver	1,811	.....	1,726
Lead	884	.....	910
Chrome iron ...	17,375	.....	1,275
Coal (sales)	6,764	.....	7,213
Totals	£265,911	.....	£241,697

The full statement published by the Rhodesia Chamber of Mines is published elsewhere in this issue. Lead and coal, it will be observed, are the only increases recorded, while the greatest decrease is provided by chrome iron, the output of which in tons has fallen from 7,784 to 571. Apart from the continued water trouble, the general position need give no cause for anxiety. Moreover, the country is nearer to the day when the greatly improved output now in prospect will be an actual experience. The decreased gold return of just over 2,000 ounces seems to be due in the main to the smaller tonnage treated, and consequently evidently to the water scarcity. Incidentally, it may be mentioned, the return is better than that of a year ago, by close on £5,000 value.

* * * *

A statement issued by the Managing Director (Mr. H. W. Kempster) of the Rhodesian Native Labour Bureau of the labour received, distributed and repatriated during the nine months ended September 30th last, shows that 11,880 natives were recruited and 11,788 distributed, their average period of contract being 11·7 months. The mines received 5,607 boys, or 47·6 per cent., and the farmers 5,098, or 43·2 per cent., while general employers accounted for the remainder, viz., 1,083, or 9·2 per cent. A territorial analysis shows that 5,082 boys went to Matabeleland, equal to 43·1 per cent., and 6,266, or 53·2 per cent., to Mashonaland, Northern Rhodesia taking the remainder—440 (all to farmers), or 3·7 per cent. The natives repatriated during the period under review numbered 1,738.

* * * *

Some time ago it was reported that the Germans had discovered coal close by the Tanganyika Lake. The following particulars are now available regarding the discovery: The coal has been discovered at 10 kilometres from the lake, on the banks of the Lufubu River. The Great Lakes line from the Congo River to the Tanganyika Lake is within 1,500 metres. The outcrops cover a very great space. Two kinds of coal have been discovered there, anthracite and coal to make gas. This discovery is most important, as by means of the Great Lakes line to the Congo River, by means of their steamers on the Congo River, from Kabalo to Bukama, and by means of the Bukama-Elisabethville section of the Katanga Railway, the German coal will be easily and cheaply brought to the smelters at the Lubumbashi, etc.

* * * *

The board of the Planet-Arcturus Company received the following cablegram in mail week from the local office of the company: "Reef has been struck Slate No. 4 level west; average assay value up to date, 23·6 dwts. for first 45 feet. Arcturus development No. 3 level continues most favourable; average assay value at 160 feet No. — crosscut east, 19·3 dwts. over 10 feet. West drive also in good value; average assay value last 15 feet, 39·3 dwts. over 10 inches. East drive, last 15 feet, 25·3 dwts. over 56 inches. Planet position shows considerable improvement." Official note: The words "at 160 feet No. — crosscut east" are not quite intelligible.

* * * *

During mail week the following cablegram was received in London by the board of the Connemara Mining Co. (Willoughby group) with reference to recent developments on the property: Trenches 450 feet north of shaft No. 1 show both reefs together width 58 feet, assay value 17s. per ton. One section 10 feet wide, assays £2 19s. 6d. per ton. Trenches 1,000 feet north of shaft, No. 4 show the east reef 16 feet wide assaying £1 5s. 6d. per ton. West reef 24 feet wide, assaying £1 14s. East reef, tonnage developed and in sight 138,750 tons, of a total value of £235,875. West reef, ore in sight 30,199 tons of a total value of £37,749, making a total of 168,949 tons, value £273,624, all oxidised. We are now crosscutting to both reefs at No. 3 level at 250 feet vertical from surface in the sulphide zone. Driving on east reef No. 2 level south, sulphide ore value shows no falling off from that in oxidised ore above it.

* * * *

The following cablegram was despatched from the property in mail week to the board of the Bechuanaland Copper Company:—"Bushman Mine.—Shaft No. 2, 300 feet level, lens L assays: At 35 feet, 8·1 per cent. over 27 inches; 40 feet, 8·9 per cent. over 39 inches; 45 feet, 19·7 per cent. over 36 inches; and ore in face. Shaft No. 5, 200 feet level, drive south on V 2 is still looking pretty good."

* * * *

The following is an official statement of recent developments on the Susanna property:—No. 7 level. The reef is 9 inches wide and pans 8 dwts. No. 8 level, underhand stope: The reef, which pans 12 dwts., is 11 inches wide. No. 9 level, overhand stope, south reef: The reef is 9 inches wide and pans 9 dwts.

* * * *

Prospects of the Turkois Extensions are seemingly good and the fact that the Amalgamated Properties Company have acquired an interest in the proposition tends to confirm the optimistic reports at present in circulation regarding this mine. It is intended to embark at once on a big scheme of development, and, should the results prove satisfactory, the company will, in accordance with an arrangement with Mr. Arnold, take over the interest that gentleman still retains. As everyone knows, the opinion which Mr. Arnold formed with regard to the original Turkois reef has been more than verified. He is equally confident about the extensions; and, what is perhaps of more importance, he has succeeded in getting the Amalgamated Properties to back his opinion to the tune of several thousands of pounds.

* * * *

The following are the official details of the development work on the Globe and Phoenix mine for September:—New main shaft, total depth, 172 feet. 120 level (station reef)

drive south from main shaft has advanced 64 feet, average width of reef 43 inches, average value 19 dwts. 18th level, drive south from No. 1a winze (F.W. Leader) has advanced 24 feet, average width of reef 4 inches, average value over 30 inches 1 dwt. 18th level, No. 3a winze north, east portion has advanced 37 feet, average width of reef 6 inches, average value over 30 inches nil. 19th level, drive north from No. 2a winze has advanced 54 feet, average width of reef 14 inches, average value over 30 inches 4 dwts. 19th level W.P., drive south from No. 2a winze has advanced 30 feet, average width of reef 22 inches, average value over 30 inches 38 dwts.; 103 feet, average width of reef 26 inches, average value over 30 inches 67 dwts. 19th level, drive north from underlay shaft, west reef, has advanced 96 feet, average width of reef 20 inches, average value over 30 inches 19 dwts. Crosscutting for month, 13 feet.

RHODESIA CHAMBER OF MINES' MONTHLY REPORT.

Native Labour Position—Railway Rates—The Output of Gold.

The report of the Executive Committee of the Rhodesia Chamber of Mines for the month of September states:—

Native Labour. The following is a summary of the returns of native labourers employed on Southern Rhodesian mines during the months of July and August, 1912:

	July.	August.
Local	14,711	13,665
Portuguese Territory	6,913	6,633
North-Western Rhodesia ...	3,895	3,823
North-Eastern Rhodesia ..	5,004	5,140
Nyasaland	5,290	5,167
Other sources	1,054	1,077
	36,867	35,505

The number of natives employed in August shows a decrease of 5,104 when compared with the corresponding month of 1911. The distribution during the months of June and July was as follows:

	June.	July.
Producing gold mines ...	23,975	24,264
Non-producing gold mines .	12,264	11,350
Coal and other mines ...	1,156	1,209
	37,395	36,823

Railway Rates.—The Committee have presented to the railway authorities a memorandum setting forth the request of the mining industry for a reduction in the railway rates on mining machinery and stores, including building material. The Committee have co-operated in the matter with the Bulawayo Chamber of Commerce, and have supported the request of the latter for a reduction in the rates for foodstuffs.

Explosives and Blasting.—Suggestions made by the Secretary for Mines for a revision of the Mines and Works Regulations as regards the handling and use of explosives have been received, and are receiving the attention of a sub-committee.

Status of Mine Surveyors.—Draft regulations, framed under the Mines and Minerals Ordinance, for the purpose of enabling mine surveyors to receive certificates of competency in Rhodesia, have been forwarded to the Committee by the Secretary for Mines, and are being considered.

Output of Gold, etc.—The output of gold from Southern Rhodesia for the month of September has been declared at 54,773·92 ozs. fine gold, valued at £230,573, being a decrease of 2,051·04 ozs. in weight, and £8,504 in value, as compared with the month of August. The following amounts and values of other metal and mineral products were also declared: Silver, 14,843·24 ozs., valued at £1,726; lead, 18·59 tons, valued at £910; chrome iron, 571·20 tons, valued at £1,275; coal, 19,130 tons (sales), valued at £7,213. The total value of the gold and mineral production was thus £241,697, as compared with £265,911 in the month of August.

Miners' Electric Safety Lamps.

Both the "Ceag" lamp, which was successful in receiving the chief prize of £600, and also one of its competitors, the "Stach" lamp, which, with seven others, was awarded a prize of £50 each, are German inventions; out of the nine successful competitors there were three from Germany, and amongst them one of such excellent merit that, taking a money value, the judges deemed it worth twelve times more than any of the others. It is a little difficult to understand why British manufacturers have so neglected this really very important piece of mining equipment, as neglected it undoubtedly has been, and even the offer of a £1,000 prize scarcely roused them from their lethargy. Probably now they will wake up when they really understand that a miner's electric safety lamp is not something that might be wanted some time, but is already being demanded. For instance, in the report of the late Mr. Pickering (H.M. District Inspector of Mines for Yorkshire and Midland District), we read the following:—"The total number of safety lamps in use was 211,356, being an increase of 3,081, as compared with the preceding year. A striking feature of the table is the increase in the number of portable electric lamps from 69 to 922. With my approval the management of two mines introduced this type of lamp into the workings. They give an incomparably better light than the safety lamps, and their general use would have the effect of reducing accidents, especially from falls of roof and from haulage."

Drilling Contests in the U.S.A.

Drilling contests of an unusual character took place at Calumet on August 24, says *The Mining and Scientific Press*. Eleven mine captains acted as judges, and prizes were from $25 to $100. In the machine contests eleven rules governed the rigging of machines and drilling. The Ahmeek team won, taking only 1·42 minutes to assemble the machine, and 3·42 minutes covering the two minutes' drilling and assembling. The Calumet & Hecla Amygdaloid team took 3·43 4-5 minutes, and a team from the Wolverine finished in 3·47 minutes. Twenty teams entered, and an Ingersoll-Rand machine was used. Seventeen men entered the one-man contest, which was won by Calumet & Hecla in 4·33 3-5 minutes, Alluez second, in 4·42 1-5; and Wolverine third, in 4·45 minutes.

THE RHODESIAN MINERAL OUTPUT FOR SEPTEMBER.

Details for the Month—A Decrease Recorded.

We have received for publication from the office of the Rhodesia Chamber of Mines (Incorporated) the following detailed statement of the mineral output for the month of September, 1912, with comparisons and values:—

GOLD.

Note.—All the declarations are in fine gold.

MATABELELAND.

Bulawayo District—	No. of Stamps.	Tons Treated.	Yield. Ozs.	Value. £
Agincourt (Est. S. Roodt, deceased)	5	297	260.85	1096
Alice (Est. R. Barkley, deceased)	10	1215	222.11	933
Antenior (W. J. Lane)	2	190	112.54	473
Do. (tailings)	—	190	28.15	118
Bengali (Hicks and Arbery)	5	253	97.18	109
Do. (tailings)	—	175	15.16	64
Big Ben (W. E. Hunt)	1	112	128.31	539
Blanket (Forbes Rhod. Synd.)	15	72	36.85	155
Bucks Reef G.M., Ltd.	5	875	217.36	913
Do. (tailings)	—	189	36.20	152
Burton (W. Holmes)	5	110	71.98	302
Bushtick Mines, Ltd.	20 1T	5329	227.12	954
Do. (tailings)	—	2953	378.89	1591
Do. (slimes)	—	2384	119.37	1761
"C" (D. and C. Synd.)	10 1C	2393	113.56	477
Do. (tailings)	—	1866	180.71	759
Do. (slimes)	—	527	110.02	462
Claremont Mines (Rhod.), Ltd., (Claremont, Nelly Extra)	20	2425	618.68	2598
Colleen Bawn (Rhod., Ltd.) tailings	—	350	16.30	77
Do. (slimes)	—	101	79.00	332
Cumberland (H. W. Bearcroft)	5	63	58.05	244
De Luxe A.1.W. & Nita (J. Gardner)	5	233	16.15	194
Dolly (F. E. B. Fripp)	6	76	8.84	37
Eagle A (Peard & Macdonald & Co.)	5	678	213.53	897
Do. (tailings)	—	270	29.21	123
East Gwanda Mines, Ltd., Geelong (Est. W. Hogg, deceased)	15	1650	267.33	1123
Ella's (Aug. & Sept.) (D. Vincent)—(tailings)	—	700	31.08	131
Gertie (T. Agar) (August)	3	120	15.67	66
Glen B. (A. Fraser)	3	162	33.66	141
Graphyl (F. E. Davis) July	5	212	56.47	237
Imbusine (Cumings and Berry)	3	458	205.93	865
Intabanenda 2 S (Estate of B. Smallie, deceased)	5	225	67.67	284
Do. (tailings)	—	150	7.31	31
Ivor (S. C. Reynolds) pannings	—	—	1.11	5
IXL tailings (Forbes Rhod. Synd.)	—	191	63.00	265
Jumpers (A. H. Newton)	5	165	32.06	135
Kalydon (Rose and Kalydor Mine)	5	170	11.20	173
Koba (Koba Syndicate)	5	290	61.35	270
Li Hang Chang (Comrie (deceased)and Brice) (tailings)	—	120	40.26	169
Limes (D. Vincent)	5	150	45.22	190
Lonely Reef G.M. Co., Ltd.	15 3T	3724	1319.99	5541
Do. (slimes)	—	3721	2336.85	9815
Matabele 3 (Criterion G.M., Ltd.)	10	1297	502.16	2019
Do. (tailings)	—	900	69.97	294
Matabele Queens' Co., Ltd. (Queens)	10	1550	487.71	2048
Do. (tailings)	—	1550	377.66	1586
Do. (slimes)	—	630	88.83	373
May Queen (E. Rochfort)	2	58	53.26	224
Minnie's Luck A (Mrs. C. M. Reid)	5	360	57.35	241
Mon Ami pannings (Mrs. A. E. Matthews)	—	—	1.01	4
Mystery A1 N (W. Souter)	2	318	111.00	605
N'daba (M. Westenberg)	2	11	9.62	40
Nelly (F. D. Roscoe)	2H	375	154.52	649
Do. (tailings)	—	210	29.06	122
New Clifton G.M. & Dev. Co., Ltd. (Entambie) (tailings)	—	398	26.90	113
New Eclipse (J. R. Stewart)	5	800	362.66	1523
Do. (tailings)	—	160	31.16	132
New Robin A. (E. T. Clayton) (tailings)	—	250	23.92	100
Northern Star No. 2 (Peel's Rhod. Synd., Ltd.)	10	690	302.84	1272
Do. (tailings)	—	483	36.11	152
Old Nic (Chart. & Gen. E. & F. Co., Ltd.)	15 4P	1497	519.05	2306
Do. (tailings)	—	1082	101.83	427
Peach, A. (C. Salomon)	4	196	109.15	444
Do. (tailings)	—	50	11.05	46
Penzance (R. Urquhart)	2	100	14.89	62
Do. (tailings)	—	80	30.41	128
Percival (E. P. Hall)	5	180	43.41	182
Do. (tailings)	—	250	18.23	77
Rainbow D.B.S. (P. Allport)	5	450	192.52	811
Red Rose (C. G. Bancroft)	5	291	27.01	115
Redrup Kop 1E (Forbes Rhodesian Syndicate, Ltd.)	10	251	2.91	12
Riverbank (R. Martindale)	2	45	26.91	113
Riversdale (Bruhns & Schwarz)	5	230	54.32	228
Romola Nigel G.M. Co., Ltd., (Eastern Queen, and Claydon)	5	361	45.16	191
Do. (tailings)	—	526	42.42	179
St. Patrick (J. Falk)	2	96	14.33	60
Selborne (C. Cowley) (pannings)	—	—	0.73	3
Smiley D. B. (Smiley Tribute, Ltd.) (clean up)	—	—	2.31	10
Suffolk (J. A. Warwick)	5	300	83.65	353
Susanna Mines, Ltd. (Susanna, Lady Lina, and Yellow Aster)	8	1120	529.11	2226
Do. (tailings)	—	516	91.02	383
Do. (slimes)	—	192	11.54	48
Svithiod (G. F. A. Nisbeth)	(2)	10	22.58	95
Tuff Nut (King's Synd.)	5	670	318.71	1340
Do. (tailings)	—	110	77.26	321
Wanderer's Rest (Wheeler, Davis, and Rintoul)	5	330	91.63	385
Bulawayo District Total			13,793.25	57 [illegible]
Gwelo District—				
Arizona No. 2 (A. J. Marchant)	5	225	74.89	315
Do. (tailings)	—	300	20.16	85
Arizona No. 2 S (L. R. Evans)	2	112	248.89	1045
Beacon Hill 1 (R. Aserman)	2	313	189.85	797
Broad Arrow (F. Ewing)	10	178	19.81	83
Bute (T. Pedlow)	5	10	22.95	96
Cinderella (P. Burt) dry crushing	—	720	66.20	278
Csardas (Wolfshall Syndicate)	10	537	415.71	1746
Do. (tailings)		350		
Do. (slimes)		128	92.20	387
Doubtful (J. H. Atherton)	3	35	42.41	178
Emerald (Sphinx Syndicate)	2	36	15.17	64
Gaika G.M. Co., Ltd.	10	2719	1054.85	4430
Do. (tailings)	—	1130	137.12	576
Do. (slimes)	—	163	159.62	670
Gartley (Mrs. A. J. Grant)	2	15	12.01	50
Glenrosa No. 1 (Mackintosh & Lister)	2	130	64.13	269
Globe and Phoenix G.M. Co., Ltd.	10 10 P	6200	8299.50	34858
Do. (concentrates)	—	225	569.75	2394
Gollywog (Albion Synd.) (tailings)	—	540	18.71	79
Gretna Green (M. L. Price)	5	210	216.45	909
Guinea Fowl (Sadler & Holloway)	5	320	56.32	237
Invulnerable (A. E. West)	5	165	59.77	251
Mafo 1 E (War Wolf Syndicate)	5	210	20.84	88
Moss (James & Morrisby)	2	159	121.88	512
Nevada (C. C. Hendrie)	2	150	20.78	87
New Dunraven G.M. Ltd.	5	991	126.03	529
Do. (tailings)	—	873	21.63	91
N'Kanya (Tranmer G. Syn., Ltd.) (Mrs. R. O. Dollar)	5	70	10.12	43
North Bonsor (Cornish Syndicate)	15	1418	267.71	1124
Do. (tailings)	—	1000	48.90	205
Pannings (R. Rogers)	—	—	2.40	10
Pompei (Pharos Synd.)	2	63	20.89	88
Pretty Polly (New Rhod. R. Co., Ltd.)	5	300	111.47	468
Do. (tailings)	—	183	42.44	178
Red Hill Dev. Syn., Ltd.	6	1720	26.21	110
Do. (tailings)	—	900	86.27	362
Rooster 3 (G. B. Haynar)	2	182	5.11	21
Selukwe Columbia G.M., Ltd.	6 4P	3140	1225.11	5145
Do. (tailings)	—	2175	393.09	1650
Do. (slimes)	—	880	85.62	359
Sheba-Bongola (Forbes R. Synd.)	5	140	18.61	78
Do. (tailings)	—	73	22.57	95
South Bonsor (Ideal Synd.)	10	500	1	4
Wanderer (Selukwe) G.M., Ltd.	10 4R	1810	1417.42	5948
Willow (W. C. Spargo)	5	210	41.86	176
Gwelo District Total			16,494.14	69 [illegible]
Matabeleland Total			30,302.89 ozs.	
Value			£127,522	

MASHONALAND.

	No. of Stamps.	Tons Treated.	Yield. Ozs.	Value. £
Victoria District—				
Grand Slam (Est. C. F. Hart, deceased) (pannings)	-	—	4.36	18
Salisbury District—				
Inyague 3 (P. L. Peters)	2	46	28.17	118
Juno N. (L. Chiappini) (tailings)	—	450	66.43	279
Louise Grand (H. S. Plant)	2	950	14.10	185
Do. (tailings)		200	17.14	198
Mont d'Or (Claxton & Russell)	2	196	88.80	373
Old Loyalty (Shamva Ilex G.M. Co., Ltd.)	5	208	84.24	354
Do. (tailings)	—	140	13.64	57
Perseverance (Byerley & Crampton)	5	339	75.30	316
Radnor 1 (Jones and Wyllie)	2	159	103.28	434
Salisbury Total			551.10	2,314
Lomagundi District—				
Alluvial (G. Blacklaws)	—	—	18.54	78
Do. (J. Gough)	—	—	16.65	70
Do. (E. A. Warry)	—	—	46.79	196
Eldorado Banket G.M. Co., Ltd.	20 2C	8P 7206	2806.48	11902
Do. (tailings)	—	7148	1603.38	6800
Linnett (A. L. R. Morkel)	2	317	178.51	750
Lone Hill 1 (Moll & Platt)	2	31	11.15	47
St. Ives (Oswald & Shine)	5	133	47.49	199
Lomagundi Total			4,728.99	20,042
Mazoe District—				
Authentic Tailings (F. Adamson)	—	400	18.18	76
Commonwealth G.M. Co., Ltd.	(30)	250	12.45	180
Do. (tailings)	—	155	20.50	87
Do. (slimes)	—	95	7.80	33
Goth B (Goth Synd.)	2	66	20.59	86
Hay G.M. Co., Ltd.	10 1T	1330	218.29	926
Do. (tailings)	—	1330	319.10	1352
Honest (G. Brown)	3	115	40.78	174
Jumbo G.M. Co., Ltd.	30	3200	726.91	3090
Do. (tailings)	—	1995	352.29	1497
Do. (slimes)	—	1205	132.54	563
Mickey (B. G. Byerley)	2	113	59.04	248
Pierrot (J. H. Hall)	2	130	29.18	123
Thornhill (Oceola G.M. Co., Ltd.)	5	841	267.14	1122
Do. (tailings)	—	371	22.52	95
Umkulu (Llahsram Synd.)	2	156	39.93	168
Mazoe Total			2,317.14	9,817
Hartley District—				
Amarosa (C. H. Wheildon)	5	190	54.00	227
Do. South (do.) tailings	—	105	13.46	56
Baluarte (M. H. Routledge) (clean up)	—	—	1.06	4
Battlefields (Minaar & McArthur)	2C	1550	480.32	2017
Do. (tailings)	—	389	212.64	893
Do. (slimes)	—	1161		
Blue Rock (Ellsmoor & Goodyer)	2	160	101.47	426
Do. (tailings)	—	130	50.51	212
Brilliant (Mabel's Luck Synd.)	7	650	429.09	1802
Do. (tailings)	—	336	105.73	444
Buller (J. Gunn)	5	200	34.73	146
Do. (tailings)	—	150	28.68	120
Cam and Motor G.M. Co., Ltd. (undeclared previously)	—		2.77	15
Cash (J. D. Kelleher)	3	40	35.88	151
Chadshunt (C. H. Wheildon) tailings)		12	3.00	13
Cirl (A. Clifton) tailings		70	9.60	40
Concession Hill and W. Exten. (C. E. Simpson)	5 1C	2P 2134	491.03	2062
Do. (tailings)	-	1390	127.95	537
Crown H. (Crown Synd.)	2	180	24.71	104
Do. (tailings)		110	29.35	123
Dahny (Philip Wiggins, Ltd.) (slimes)	-	400	45.79	192
Dahny 1 N (W. J. Harvey and J. H. West)	1C	660	127.14	534
Do. (tailings)		350	109.55	460
Dreadnought (W. E. Masters)	C	540	40.77	171
Duke No. 1 (Jose and Munro)		36	29.48	124
Duke No. 4 (J. Bertelsen)	2	60	17.05	72
Eiffel Blue & E. Ext. (Willoughbys Con. Co., Ltd.)	10	1320	560.59	2354
Do. (tailings)		830	57.52	242
George I. (Heroine G.M. Co., Ltd.)	2	230	61.93	260
Grant Mines of Rhodesia, Ltd.	30 2T	11101	1169.89	17687
Glasgow Mines, Ltd.	5	231	72.18	303
Do. (tailings)		125	29.53	124
Glencairn No. 3 (Glenrosa Synd.)	1	340	247.37	1039
Do. (tailings)		773	33.34	140
Golden Valley (J. Mack)	10	820	156.83	659
Do. (tailings)	—	595	73.79	310
Great Tontine (Yellow Jacket Synd.)	2	312	57.65	242
Guelph (Mrs. M. Davidson & J. Davidson (pannings)	—	—	1.67	7
Inez (A.S.T. Synd.) (slimes)		980	30.84	130
Iron Mask 2 (J. J. Murray) (tailings)		40	11.50	48
Kanyemba (Kanyemba Synd.)	5	220	174.54	733
Do. (tailings)	—	170	40.36	169
Kyrenia (J. Mack)	5	472	98.08	412
Lapwing (W. Smith)	(2)	10	13.84	58
Mali (McAdam and Harrill)	2	265	226.80	953
Do. (tailings)	—	300	28.09	118
Mammoth (J. Colliver)	2	270	54.97	231
Masterpiece G.M. Co., Ltd.	5	560	130.72	549
Do. (tailings)		300	18.26	77
Oleander G.M. Co., Ltd. (Oleander Arlandzer and Arlandzer 4)	3	381	135.35	568
Do. (tailings)	—	164	79.01	332
Do. (slimes)	—	217		
Owl (A. Rolfe)	10	1321	484.96	2037
Do. (tailings)	—	900	164.49	691
Pickstone Gold Mines, Ltd.	1	125	166.48	1959
Do. (tailings)	—	297	128.85	541
Pool (Pool Synd.) July to September	5	730	135.39	569
Do. (tailings)	—	510	49.83	209
Progressive D (R. R. Aitkin)	2	100	57.03	240
Seigneury (Central Min. & Invest. Corporation, Ltd., and N. A. Arnold)	5	397	115.74	486
Shepherds (Phoenician Synd.)	5	610	337.86	1419
Do. (tailings)	—	600	239.07	1004
Sid (Sebakwe & Dist. Mines, Ltd.)	5	690	353.44	1484
Tea (Tea Claims Synd.)	5	885	238.79	1003
Three Cheers No. 1 (F. J. Nalty)—Tailings	—	710	32.56	137
Tia No. 1 (Mrs. A. Scholl)	(5)	37	1.11	5
Togo (Philip Wiggins, Ltd.)	5	200	28.87	121
Try Again (Try Again Synd.)	—	500	28.56	120
Unknown (Brooks and Martin)	2	28	3.99	17
Warthog (C. Tallon)	5	125	34.26	144
Washington (I. J. Minaar)	5	450	285.11	1198
Do. (tailings)	—	410	43.36	182
Whistlecock, 1 W (T. McDowell)	2	200	25.44	107
Do. (tailings)	—	100	33.99	143
White Rose (J. Mack)	(10)	240	149.34	627
Hartley District Total			12.608.96	53,133
Umtali District—				
Eastern Clutha (E. A. Fisher)	3	9	4.11	17
Kent (Sussex Synd.)	5	672	167.89	705
Do. (tailings)	—	610	55.85	234
Liverpool (S. Russell)	(10)	100	26.14	110
Do. (tailings)	—	217	10.38	44
Do. (slimes)	—	360	8.43	35
Liverpool (R. G. Snodgrass)	5	273	31.45	132
Do. (tailings)	—	160	35.62	150
Do. (other sources)	—	—	9.20	38
Liverpool (R. Snodgrass) August	5	660	104.90	441
Do. (tailings)		240	58.03	244
Palmyra (J. de G. Birch)	3	60	16.21	68
Pilgrim (J. Meikle)	5	293	110.23	463
Rezende Mines, Ltd.	60	9700	1630.93	6918
Do. (tailings)	—	2622	149.19	1906
Do. (concentrates)	—	190	730.33	3053
Rezende 1 W. A. (Imbeza Synd.)	10	3391	812.27	1325
Do. (Concentrates)	—	5	32.89	136
Do. (Umtali W. Synd.)	10	390	107.38	451
Do. (tailings)	—	186	37.93	159
Do. (slimes)	—	200	18.40	77
Umtali (Umtali Waterfall Synd.)	(10)	715	175.13	736
Do. (tailings)	—	310	36.84	155
Do. (slimes)	-	350	30.65	129
Umtali Total			4,200.38	17,726
Mashonaland Total			24,410.93 ozs.	
Value			£103,051.	
Grand Total			54,773.82 ozs.	
Value			£230,573.	

Summary.

	Ozs.	Value.
Silver	11,843.24 ozs.	£1,726
Lead	18.59 tons	910
Chrome Iron	571.20 tons	1,275
Coal	20,685.00 ,, (sales)	7,213

TOTAL VALUE OF SEPTEMBER OUTPUT ... £241,697

COMPARISONS.

Gold Output, August, 1912	56,824.86 ozs.	£239,677
Gold Output, September, 1912	54,773.92 ,,	230,573
Decrease	2,051.04 ,,	8,501
Gold Output, September, 1912	54,773.82 ,,	230,573
Gold Output, September, 1911	53,615.31 ,,	225,777
Increase	1,158.51 ,,	4,796

GRAND TOTAL OUTPUT.

		Ozs.
Gold.—		
Output to December 31,	1906	1,989,775.69
Do. do.	1907	612,052.00
Do. do.	1908	606,961.84
Do. do.	1909	623,388.42
Do. do.	1910	609,955.31
Do. do.	1911	628,521.37
Do. do.	1912 (9 months)	482,758.37
Total to date		5,553,113.00
Value of Gold Output to date		£21,703,803
Silver.—		Ozs.
Output to December 31,	1907	145,678.20
Do. do.	1908	283,424.00
Do. do.	1909	262,132.78
Do. do.	1910	217,632.74
Do. do.	1911	187,730.02
Do. do.	1912 (9 months)	134,822.16
Total to date		1,531,120.17
Lead.—		Tons.
Total to date		6,431.44
Copper.—		Tons.
Total to date		359.01
Chrome Iron.—		Tons.
Output to December 31,	1907	11,663.99
Do. do.	1908	13,357.53
Do. do.	1909	25,620.47
Do. do.	1910	44,002.00
Do. do.	1911	52,363.21
Do. do.	1912 (9 months)	49,276.40
Total to date		196,283.60
Coal.—		Tons.
Output to December 31,	1907	122,615
Do. do.	1908	164,114
Do. do.	1909	170,893
Do. do.	1910	180,068
Do. do.	1911	212,529
Do. do.	1912 (9 months)	157,643
Total to date		11,307,862

	Tons.
Tungsten Ores.—	
Total to date	124.87
Antimony.—	Tons.
Total to date	13.75
Asbestos.—	Tons.
Total to date	1,119.50
Diamonds.—	Carats.
Total to date	6,889.24
Other Precious Stones.—	Carats.
Total to date	90,069.50

C: Chilian Mill; T: Tube Mill; G.R.: Gates Roll; H: Hunting ton Mill; P. Pneumatic Stamps: D: Dolly.

THE MONTHLY TOTALS.

The following table shows the monthly and annual gold outputs of Southern Rhodesia since January, 1910, together with the value of the annual outputs of other minerals:—

Month	1910 £	1911 £	1912 £
January	227,508	207,904	211,918
February	203,888	203,055	209,743
March	228,385	231,947	215,102
April	228,213	221,296	221,476
May	224,888	221,413	234,107
June	214,709	215,346	226,867
July	195,233	237,517	240,514
August	191,423	243,712	239,977
September	178,950	225,777	230,573
October	234,229	218,862	
November	240,573	214,010	
December	199,500	207,026	
Total Gold	2,568,198	2,647,895	2,032,677
Other Minerals	222,930	242,864	187,028
Total Value	2,791,128	2,890,759	2,219,705

QUARTERLY REPORTS.

Consolidated Gold Fields Group.

The following reports on operations for the quarter ended the 30th of September of mines of the Consolidated Gold:—

SIMMER AND JACK.

Development Work.—Number of feet driven, risen and sunk, 1,022ft.; estimated number of tons developed, 122,764*; ore crushed, 226,700 tons; gold recovered, 60,229.618 ozs.; revenue from gold, £253,829; working expenditure, £126,733; cost per ton milled, 11s. 2.168d.; profit on working, £127,096; profit per ton milled, 11s. 2.552d.. sundry revenue, £6,572; total profit, £133,668; appropriation for renewals fund, £5,625; appropriations for shaft sinking, £783; profits tax, estimated, £11,250; estimated net profit, £116,010; amounts spent during quarter chargeable to additions and renewals fund, £5,983; reserve gold at 30th September, 1,455 ozs.

ROBINSON DEEP.

Development Work.—Number of feet driven, risen and sunk 4,015; estimated number of tons developed, 103,036*; ore crushed, 140,600 tons; gold recovered, 51,588.471 ozs.; revenue from gold £229,019; working expenditure, £132,371; cost per ton milled, 18s. 9.959d.; profit on working, £96,615; profit per ton milled, 13s. 8.97d.; sundry revenue, £1,329; total profit, £93,374; appropriation for renewals fund, £7,500; appropriation for shaft sinking, £353; profits tax, estimated, £6,000; appropriation for bewaarplaatsen annuity, £15,000; estimated net profit, £69,120; amounts spent during quarter chargeable to additions and renewals fund, £13,853; reserve gold at 30th September, 2,362 ozs. In addition to the sum of £7,500 appropriated for additions and renewals fund an amount of £7,268, being the value of 1,733.906 ozs. fine gold recovered from the dismantled mill plates, has been placed to the credit of that fund and is not included in the profit for the quarter. The total value of gold recovered to date from this source amounts to £18,661. The sum of £15,000 appropriated for the payment of the bewaarplaatsen annuities represents the monthly amounts of £5,000 which are being set aside for this purpose. The total amount so appropriated to 30th September (together with interest accrued thereon which has now been capitalised) was £66,299 7s. 6d., out of which the second annuity, due on the 30th September, 1912 has been paid, leaving £37,301 7s. 6d. to meet remaining annuities in this connection amounting to £231,981, or a balance of £194,683 still to be provided

JUPITER.

Development Work.—Number of feet driven, risen and sunk, 2,932.5ft.; estimated number of tons developed, 42,336*; or crushed, 119,300 tons; gold recovered, 29,963.79 ozs.; revenue from gold £125,817; working expenditure, £112,516; cost per ton milled, 18s. 10.351d.; profit on working, £13,302; profit per ton milled, 2s. 2.76d.; sundry revenue, £1,014; total profit, £17,315; appropriation for renewals fund, £61; estimated net profit, £17,245; reserve gold at 30th September, 1,250 ozs. The amount expended on capital account during the quarter was: On plant buildings, £2,596; shaft sinking, £2,039; development, £10,460. A credit to development of £11,961 was charged into working costs.

SIMMER DEEP.

Development Work.—Number of feet driven, risen and sunk, 4,011ft.; estimated number of tons developed, 124,464*; ore crushed, 157,770 tons; gold recovered, 32,674.793 ozs.; revenue from gold, £137,174; working expenditure, £125,378; cost per ton milled, 15s. 10.808d.; profit on working, £11,797; profit per ton milled, 1s 5.951d.; sundry revenue, £1,675; total profit, £13,471; appropriation for renewals fund, £363; debenture interest and charges, £12,812; estimated net profit, £297. A sum of £12,061 was spent on plant, shaft sinking and development, against which a sum of £13,828 was charged to working costs for redemption of development, which left a credit of £1,767.

SUB NIGEL.

Development Work.—Number of feet driven, risen and sunk, 1,226.5ft.; ore crushed, 14,036 tons; gold recovered, 6,190.055 ozs. revenue from gold, £25,954; working expenditure, £20,763; cost per ton milled, 29s. 7.916d.; profit on working, £5,191; profit per ton milled, 7s. 4.674d.; sundry revenue, £602; total profit, £5,793; estimated net profit, £5,724; reserve gold at 30th September, 900 ozs. On capital account a sum of £19 on plant and £1,512 on shaft sinking was spent during the quarter. There was charged into working costs £1,700 for exploratory development and £1,035 for development.

* The quarterly estimates of tonnage must not be taken to include all ore fully or partially developed during the period, as blocks of ground may be held over pending fuller information.

THE WEEK IN THE SHAREMARKET.

Steady at Lower Levels—Awaiting News from Europe.

THE market may be described as steady at lower levels. Business is, of course, restricted by the possibility of a European crisis following the overthrow of Turkey. There can be no disguising the fact that the European situation is one of extreme delicacy, and that it is bound to become worse before it can be better. There are really no features of outstanding interest to chronicle, but the receipt of favourable news from Europe would very soon be reflected in prices.

	* Friday 25th		* Sat 26th		* Monday, 28th		* Tuesday. 29th		Wed. 30th		Thurs 31st	
African Farms	14	0	14	6s	14	3	14	3s	14	0s	14	3s
Apex Mines	21	0s	25	0s	25	9s	25	9	25	0s	25	6s
Aurora West	...		9	9s	...		10	0s	10	0s	10	0s
Bantjes Consolidated	...		23	9s	23	6s	23	0s	23	0s	23	6s
Benonis	3	9s	3	9s	3	9s	3	9s	3	9s	4	1s
Bushveld Tins	0	9s	0	9s	0	9s	0	9s	0	9s	0	9s
Brakpan Mines	...		75	0s	76	0s	...		75	0s	75	6s
Blaauwbosch	...		26	0s	25	0s	...		...		...	
British S A.	23	6s	24	6s	...		...		...		24	3s
Breyten Collieries	...		30	0s	25	0s	30	0s	30	0s	27	6s
City and Suburban	45	0s	45	6	45	0s	45	0s	45	0s	45	6s
City Deeps	57	0s	57	0s	57	0s	57	0s	57	0s	57	0s
Cloverfield Mines	5	3s	5	6s	5	4s	5	9s	5	6s	5	9s
Cons. Langlaagtes	24	0	26	0s	26	3s	26	6½	23	3s	26	6s
Cons. Main Reefs	17	9s	18	3	18	3	17	9	17	9s	18	0
Coronation Freeholds	0	5s	0	5s	0	5s	0	6s	0	5s	0	6s
Crown Mines	135	0s	135	0s	135	0s	...		...		...	
Cons. Mine Selections	10	0s	10	0s	10	0s	...		10	0s	10	3s
Clydesdales	8	6s	8	6s	8	0s	...		...		8	6s
East Rand Cent.	11	5	11	6	11	8	11	3s	11	6	11	6s
East Rand Coals	2	4s	2	4s	2	1s	2	4s	2	4s	...	
East Rand Deeps	...		...		2	3s	2	6s	2	6s	2	9
East Rand Props.	51	0s	51	9s	54	0s	53	0s	51	9s	55	0s
East Rand Deb	£93		£93		£9°½		...		...		£93	
Eastern Gold Mines	1	10s	2	0s	1	10s	1	10s	2	0s	1	10s
Frank Smith Diam	8	6s	8	6s	8	6s	8	6s	8	9	8	6s
Govt. Areas	21	0s	21	0s	21	0s	21	0	21	3	21	3
Glencairns	...		...		3	9s	...		...		...	
Glencoe (Natal. Colls	...		...		...		7	0s	7	0s	6	0s
Geduld Props.	21	6s	22	0s	21	6s	21	6s	21	6s	22	6
Hex Rivers	2	0	2	0s	2	0s	2	6	2	6s	2	9s
Jupiters	12	0s	12	0s	12	0s	...		...		11	9s
Klerksdorp Props	2	7s	2	7	2	7s	2	7s	2	7s	2	7s
Knight Centrals	11	9s	12	0	12	0s	12	0s	11	9	11	9s
Luipaardsvlei Estates	10	3s	10	6s	10	0s	10	0s	10	0s	10	0s
Lace Props	3	0s	3	6	3	3s	3	4	3	1s	3	6s
Lydenburg Gold Farms	2	4s	2	3s	2	4s	2	5s	2	4s	2	3s
Main Reef Wests	18	6s	19	0s	20	0s	20	9s	18	6	19	0s
Modder B's	63	0	63	0s	63	0s	64	6	63	0s	64	0s
Middelvlei Estates	1	4s	1	3s	1	3s	1	3s	1	3s	1	3s
Modder Deeps	39	3s	39	6s	40	0s	39	0s	39	6s	40	0
New Eras	7	1s	7	0s	7	3	7	3	7	0s	7	3
New Kleinfontein	24	6s	24	6s	24	0s	24	6	23	0	22	9s
New Rietfontein	...		7	9s	7	9s	7	6s	...		7	9s
New Boksburgs	1	9s	1	9s	2	0s	2	0	1	9s	1	10s
New Geduld Deeps	2	4s	2	3s	2	4s	2	3s	2	4s	2	4s
New Eland Diam.	28	0s	...		30	0s	...		25	0s	30	0s
Orange Diamonds	1	1s	1	2s	1	2s	1	2s	1	3s	1	4s
Pretoria Cement	55	0s	55	6s	55	0s	55	6s	55	3s	56	0
Potchefstroom Est.	...		1	0s	1	0s	1	0s	1	0s	1	0s
Paardekraal Estates	...		0	6s	...		0	6s	0	6s	0	6s
Princess	...		9	9s	...		...		...		9	3s
Premiers Preferred	...		...		...		...		172	6	...	
Rood. Durban Deeps	21	6s	...		20	0s	21	0s	21	3s	21	0s
Rood. U.M.R.	15	0s	15	0s	15	0s	...		15	6s	15	0s
Rand Nucleus	2	6s	2	7s	2	7s	2	8s	2	8s	2	8s
Randfontein Estates	27	6s	28	0s	28	3	27	9s	27	0s	28	3s
Randfontein Deeps	5	0s	5	0s	...		5	0s	...		6	0s
Rooiberg Minerals	30	3s	32	6s	32	6	33	0	32	9s	32	9s
Rand Klips	4	0s	4	4s	4	9	6	6	6	6	6	7
Roberts Victors	...		...		30	0	...		30	0s	...	
	8 Buyers						8 Sellers.					

	Friday 25th.		Sat. 26th		Monday. 28th		Tuesday 2 th		Wed, 30th		Thurs. 31st	
Rand Collieries	5	0s	5	0s	5	0s	...		...		6	0s
Ryan Nigels	...		3	6s	3	6s	3	6s	3	6s	3	6s
Simmer Deeps	2	6s	2	6s	2	6s	2	6s	2	6s	2	6s
South African Lands	4	0s	4	1s	4	1s	4	0s	4	0s	4	1s
Sub Nigels	7	6s	7	5s	7	9s	7	9s	7	9s	...	
Springs Mines	...		15	6	15	0s	15	0s	...		15	6s
S A. Breweries	41	0s	39	0s	41	0s	39	0s	39	0s	39	0s
Shebas	5	3s	5	3s	5	0s	5	0s	5	3s	5	0s
Trans. G.M. Estates	...		50	0s	50	0	51	0s	51	0s	50	0s
Trans. Coal Trusts	44	3s	44	6s	44	9s	45	0s	44	6s	44	6s
Temple Tins	1	0s	1	0s	0	6s	1	0s	1	0s	0	6s
Tudors	...		2	0s	...		...		2	0s	7	9s
Van Ryn Deeps	17	0s	17	6	17	3	17	0	17	0s	17	3
Villiage Deeps	41	6s	41	0s	...		...		41	6	41	0s
Vogel. Cons. Deeps	1	0s	1	0s	1	0s	...		...		...	
Village Main Reefs	45	0s	47	6s	47	6s	...		...		...	
Voorspoed Diamonds	10	0s	10	0s	...		...		...		10	0s
Witwatersrands	55	0s	58	6s	58	6s	57	6s	56	6s	55	0s
Wolhuters	20	0s	20	0	20	0s	20	0	20	0	20	0s
Wit. Deeps	52	0s	53	0s	53	6	53	0	52	0s	...	
West Rand Est.	3	3s	3	3s	3	3s	3	3s	3	3s	...	
West Rand Con.	15	6s	15	0s	16	3	16	0s	...		15	3s
Zaaiplaats	25	0s	27	9s	26	6	26	0	24	6	24	3
	8 Buyers.						8 Sellers.					

Geduld Development Values.

For the three months ended 30th September, 1912, the footage sampled on the Reef totalled 2,515 feet, the assay values of which are as follows:—No. 2 Shaft: No. 1 level, north drive, 265 ft. sampled 12.7 dwts. over 21.1 ins.; No. 1 level, south drive, 55 ft. sampled 10.4 dwts. over 13.2 ins.; No. 1 level, south No. 1 winze, 90 ft. sampled 3.6 dwts. over 27.4 ins.; No. 2 level, north drive, 175 ft. sampled 7.9 dwts. over 8.4 ins.; No. 2 level, north No. 1 raise, 250 ft. sampled 12.3 dwts. over 36.7 ins.; No. 2 level, north No. 1 winze, 105 ft. sampled 36.4 dwts. over 23.7 ins.; No. 2 level, south drive, 195 ft. sampled 3.9 dwts. over 12.3 ins.; No. 2 level, south No. 1 raise, 120 ft. sampled 5.5 dwts. over 21.4 ins.; No. 2 level, south No. 1 winze, 90 ft. sampled 7.8 dwts. over 16.9 ins.; main south drive, No. 4 raise, 120 ft. sampled 8.0 dwts. over 22.4 ins.; main south drive, winze from No. 4 raise, 60 ft. sampled 10.1 dwts. over 53.0 ins.; main south drive, 55 ft. sampled 4.1 dwts. over 16.6 ins.; "A" level, No. 1 north raise, 120 ft. sampled 14.3 dwts. over 40.6 ins.; "A" level, No. 1a north raise, 185 ft. sampled 17.4 dwts. over 35.3 ins.; "B" level, north drive, 15 ft. sampled 3.1 dwts. over 13.7 ins.; "B" level, No. 2 north raise, 130 ft. sampled 17.9 dwts. over 21.8 ins.; "B" level, No. 2a north raise, 165 ft. sampled 16.6 dwts. over 20.7 ins.; "B" level, No. 3 north raise, 25 ft. sampled 7.2 dwts. over 30.0 ins.; "B" level winze, 10 ft. sampled 5.0 dwts. over 60.0 ins.; winze from No. 1 south raise, 90 ft. sampled 5.7 dwts. over 9.7 ins.; main No. 1a north raise, 70 ft. sampled 5.7 dwts. over 25.4 ins.; No. 3 south winze, 35 ft. sampled 7.7 dwts. over 12.3 ins.; connecting drive, 90 ft. sampled 17.4 dwts. over 11.1 ins.

Mr. W. L. Honnold has returned to the Rand.

* * * *

We regret to record the death, which occurred very suddenly at Jacob's Rush river diggings, of Mr. Benson Aaron, managing director of the Pniel Diamond Company. Mr. Aaron was well known throughout South Africa, especially on the Rand. He was only forty-six, and succumbed to heart failure.

Correspondence and Discussion.

Comments on Questions Arising in Technical Practice or Suggested by Articles in the Journal—Views, Suggestions and Experiences of Readers.

Brakpan Deeps.

To the Editor, *South African Mining Journal.*

Sir,—Although I have seen many references in your columns at various times regarding the flotation to be known as the " Brakpan Deeps," I cannot recall ever having seen in what ratio the profit taken by the Government will be divided with the owners of the farm " Schapenrust " (*i.e.*, the East Rand Central Co.). Would you kindly let me know through your " Answers to Correspondents " column to what extent this company will participate.—Yours, etc.,

" CONTRIBUTOR."

29th October, 1912.

As explained by the chairman at the annual meeting of the East Rand Central Company on the 26th May, 1910, the company would receive 18 per cent. of the Government share less 10 per cent. The 10 per cent. deduction represents a 10 per cent. profit tax. Assuming that the Government received, say, 44·06 per cent. of the profit of the lessor company, the East Rand Central would receive 18 per cent. of 34·06 per cent or 6·13 per cent.—Ed., *S.A.M.J.*

A Diamond Cutting Industry for South Africa.

To the Editor, *South African Mining Journal.*

Sir,—A caustic reference to " reputable daily papers adopting the muddled economics of the ' Judlin school ' to buttress the cry for diamond cutting in South Africa " does not so cheaply dispose of this question. South Africa is surely entitled to all the possible advantages it possesses in a monopoly of diamonds. The world will have them at any price. Since 1887 the value has increased three hundred per cent., and a recently published cable quoted the rise in the last ten years at two hundred per cent. Everybody is delighted when the price goes up; even our biggest and richest customer, the American purchaser, rejoices. It is one of those luxuries that nobody ever wants cheapened. I must make one exception: the London Syndicate or Trust wants cheap diamonds to sell dear, pocketing all the profit between the producer and the trade. Now this country requires European immigrants. Men and women alone develop a land. Not all your text-books on Free Trade will teach one how to induce people to come to a new country other than by ensuring them profitable employment. Cheap living without work is futile. Mining for diamonds employs under four thousand whites, but cutting the gems keeps twenty thousand white workers. The amount paid for that service, four millions, exceeds the total wages paid to both black and white on the mines here. We want to have these cutters here breeding white children to redress the colour balance of a black South Africa. The means suggested by " muddled economists " is that adopted by America, which has transferred 600 cutters to her shore to cut our diamonds, a duty ensuring the industry. We do it with ostriches, why not with diamonds? Surely it needs no demonstrating that an export duty on rough stones, if sufficient, will bring the cutters and centre the buying trade as well. And if insufficient to do this the revenue would be benefited by the amount of the duty. Even a " muddled " Free Trader should be able to see that in either way the country of production stands to win, and the consumer, mostly the wealthy American, would pay the increased price or the duty. It could hurt nobody, and immensely benefit South Africa.

The opposition, greatly interested, base their objection chiefly on two assertions—that cutters would not come, and that the trade holds seventy-five per cent. of the total production of the world, and could draw on its resources while shutting down our mines for years. The first reason has been disproved both here and in America, the second is ridiculous, and has been upset within the last few days by Mr. Gustav Imroth's undoubtedly true statement that the supply is nicely regulated to the world's requirements. If the argument were true, the trade would now be holding fully a hundred and fifty millions' worth of diamonds, and it needs only to be stated in figures to show how untenable it is. Whether South Africa has received the full advantage that it should by the decrease of its assets by a hundred and fifty millions is arguable, but let it pass. We have still 250 millions of diamonds to produce from working mines, according to Sir David Harris in the *S.A. Mining Journal*, and we wish to have the greatest possible benefit for South Africa, not for the Trust, from this potential wealth, which we have to succour and defend, with our bodies if necessary. We produce 98 per cent. of the world's diamonds; we supply 40 per cent. of the world's gold. The annual output of both is fifty millions sterling. The reckoned output in the future will total over fifteen hundred millions. But, and here is the whole crux of the question, the total number of whites employed, and that ever will be employed under present conditions, is less than thirty thousand. Is this fair to South Africa? What is the remedy? You entreat the kindly beneficence of De Beers; I and others ask no favours, but go in for the export duty on rough stones.—I am, etc.,

G. A. HAY.

Why a S.A. Diamond Cutting Industry is Impossible.

To the Editor, *South African Mining Journal.*

Sir,—Apropos of the controversy on diamond-cutting, may I ask you to print the following excellent statement of the case against it, taken from the *Cape Argus*.—Yours faithfully,

" READER."

There are at the present time some 15,940 workmen engaged in the trade, earning wages which amount in the aggregate to £3,750,000 per annum. The principal cutting centres are Amsterdam and Antwerp, with 9,000 and 5,000 workers respectively. France employs 1,000 hands; Germany, Switzerland, and New York, 300 each, while London, with only 40, is out of the running. Wages rule high Cleavers, accomplished workmen, earn on an average £10 per week; the average wage for all workmen, good and bad, comes to about £1 10s. per week in all European centres. In New York the average wage is considerably more than double that paid in Europe. It is obvious that if it were possible to transfer the entire industry to this country South Africa would receive a very important addition to its spending power. The Tariff Commission went into the subject, and, though keen to discover new industries, decided that they had better leave it alone. Mr. Judlin, however, is an optimist of the first water. He thinks it would be quite easy to compel the world to buy our diamonds ready cut, instead of in the raw unmanufactured state. " Clap on a duty of 25 per cent.," he says in effect, " and the trick will be done." The failure of protectionist America, the biggest diamond consumer in the world, to establish a cutting industry of the slightest importance indicates pretty clearly that a highly specialised industry of this description is not easily dislodged from the Old World cities where it has been carried on for ages, but there seems to be absolutely no limit to the childlike faith of some people in the thaumaturgic effects which are supposed to follow upon a dose of protection. Let us assume, for the sake of argument, that the controllers of the diamond business, contrary to the general belief, are not getting the maximum price for their product, and that it would be possible to increase prices further by 25 per cent., the amount of the proposed export duty, without causing a slackening of the demand. In that event an extra sum of £2,186,681 would be made available to cover the additional cost of manufacturing diamonds in South Africa. In practice, however, only a part of this sum could be used to pay higher wages for the workmen, because no

employer would dream of shutting down his factory in Amsterdam or Antwerp, which would mean a great monetary loss to him, unless he were convinced that the finished article, landed in Europe, would cost him less if cut in South Africa than if shipped in the rough and manufactured in Europe. But even if the whole sum could be made available, there is, we believe, no doubt, that the wages which the South African cutting industry could afford, on the strength of the tariff, to pay would not be nearly high enough to induce the best workers in Holland to emigrate with their families to this country, where the cost of living is, taken all round, enormously in excess of that which obtains in Europe. It has been suggested that we might train up our own workers. Diamond cutting, however, is in the main a highly skilled industry, in which hereditary talent counts for a great deal. Apprentices have to work at least five years in Europe before they are anything like accomplished workmen, and to become a good cleaver many years of experience are required. The nature of the work being so delicate, and the material to be operated upon being so expensive, no scope can be allowed for experimental work. We think that it may be taken for granted that any diamond cutting factories which might be started in South Africa would have to compete against the diamond cutting factories of Europe, which would continue to enjoy a great advantage in the superior quality of their labour, owing to the fact that the real wages ruling there will be considerably better than the nominally higher wages obtaining here. Now in order to cut 10,000 carats of average quality South African diamonds per month, a factory costing about £40,000 is required, where 600 workmen would be employed. To deal with the entire output 26 or 29 factories of the above size would be required, costing over one million sterling. From what source would all this capital or any part of it be forthcoming? Clearly the diamond trade would not be willing to risk its capital on an experiment offering no prospect of gain, but every probability of inconvenience and loss. The only chance would be for the Government to plunge into the diamond business itself by undertaking to finance the new factories —an operation involving considerable financial risk. Without action of this kind, the 25 per cent. export duty would be ineffective. Nobody could really benefit from such a policy. The State, it is true, would derive an increased revenue from direct taxation; but on the other hand its revenue from indirect taxation would suffer possibly in a greater measure, through the blow dealt to diamond mining. If the trade in Europe and America were to retaliate by stopping their purchases of raw diamonds altogether for a time, an immediate crisis would be produced in South Africa. For it must not be forgotten that every branch of the diamond industry has to be financed by the big men who constitute the syndicate. They pay cash for their purchases from the mines, and they sell on a system of extended credit to the trade, so that a whole year is required before the first money paid to the mines is brought in again. It has been estimated that something like fourteen millions of money are employed in financing diamonds. The diamond business is one of the most delicately adjusted and complicated in the world, and a South African Government which tried to meddle with it would speedily find itself landed in a mess.

Criticism from Kimberley.

THE CASE FOR A DIAMOND-CUTTING INDUSTRY.

To the Editor, *South African Mining Journal.*

Sir, In your issue of Saturday, the 26th instant, I read a very interesting article on the shortcomings of De Beers. I do not hold a brief for this wealthy corporation, whose directors no doubt know how to defend themselves; at the same time I think it only fair to remark that you might have a shot nearer home at some of your own wealthy houses in Johannesburg, and tell us what good they have ever done for the country. I do not think their generosity would even compare with De Beers, who do little enough, God knows. You remember that the Yankee remarked, after looking over Johannesburg to find some beautiful statues or public buildings, "I think Johannesburg is a monument of ingratitude. There is not a single building, park or statue in your town that the citizens can point at with pride and say 'that has been presented to the city by so-and-so.'" No, sir, do not single out one corporation; you have been unfortunate to select the best of a bad lot. It would be interesting had you promised to write a series of articles and taken your own houses one by one and let us hear what they have done for the good of the Transvaal. I entirely differ and disagree with your remarks that a diamond cutting industry would not be a profitable thing for South Africa. Your sneer about "muddled economics of the 'Judlin school' to buttress the cry for diamond cutting," etc., etc., is the weakest part of your whole article. As the recognised capitalist organ, one gives you credit for your temerity in daring to bump up against financial and mining corporations. The people of this country must yet some day decide whether it is wiser to "crawl upon one's belly" to ask De Beers and the Premier Mine to assist South

African industries or boldly demand what we are entitled to as a country seeking development and not mere exploitation. We want our share of the sun, and should demand it. South Africa should have a diamond cutting industry, and the country should demand that a tax of 20 per cent. or more should be clapped on all uncut or rough stones leaving the country. This would mean a large increase of white people, all the wealthy diamond buyers of the world would come to South Africa, and millions would be circulated in the country. I am surprised that your valuable journal, which has such a large and influential following, should refrain from backing up this industry. Both Mr. Judlin and Mr. Lavine have convinced us that it is possible to run an industry here, provided such industry is protected by a heavy tax on the rough stuff leaving the country. You should urge political parties to import diamond polishers, and create a State diamond cutting industry or subsidised private industries and prosperity to the country will soon enough follow.—Yours, etc.,

PROTECTION.

Kimberley, October 28.

The Shortcomings of De Beers.

A SPIRITED DEFENCE.

To the Editor, *South African Mining Journal.*

Sir,—To judge from the tone of one of your leading articles in last week's issue of the *S.A. Mining Journal*, and the nature of the sentiments expressed therein, the sight of "the globular millions in which De Beers is happily enabled to express its revenue and profits for the year ended July 30th last," has much the same effect upon you as the contemplation of private wealth has upon Mr. Lloyd George. Without wishing to provoke a lengthy discussion, I should like to point out that you have, apparently, an entirely erroneous conception of the proper function of a joint-stock company. Put into a few words, it is to make profits, honestly, and to as great an extent as possible, for its shareholders. There is no duty incumbent upon such a corporation as De Beers to be philanthropic, or self-sacrificing, or to take practical cognisance of those circumstances which you describe as opportunities and responsibilities. When you say, therefore, that "an organisation of this sort cannot be allowed to ignore" these things, you are at once unsound and impertinent.

Having established this proposition, I may turn to the somewhat vague assertion of yours that "De Beers to-day has lost the spirit and tradition of Rhodes and Beit and Wernher." As far as can be gathered from their acts and statements, the spirit and tradition of these persons, as directors of public companies, were in no way different from the feelings and aims of those who direct similar undertakings at the present moment. What was done by Rhodes was done, no doubt, under the noble impulse of patriotism and true statesmanship, but in so far as he was aided in his work by De Beers or the financiers whose names you mention, he was aided on strictly financial principles and for legitimate business motives. Rhodes, to paraphrase the words of Canning, called the northern territory into existence to redress the balance of Boer domination in South Africa, and to uphold the majesty of the British Empire. His position as chairman of the De Beers Corporation did not lead him to look upon this undertaking as an opportunity or a responsibility duly dealt with by himself and his board. It was purely a personal matter with which De Beers, as a company, had nothing to do, except on strictly business grounds. So much, then, for the matter of spirit and tradition.

When you proceed to assert, however, that De Beers has "sold its birthright of enormous potentiality for the small profits and quick returns of the purely money-grubbing concern," you are guilty of misrepresentation. Although it makes no claim to build empires, and has no objects of this kind in its articles of association, it has never disregarded the call of charity nor been oblivious of the welfare of its fellow-citizens. Year after year, at annual meetings, the cry of the needy and the orphan has been generously responded to by donations to Kimberley institutions, the announcement of which has come to be looked upon as part of the formal proceedings of the meeting. Apart from this, the left hand of the company, unknown to its right, so to say, has constantly been busy in the work of relieving want. Nor are its gifts confined to those in its immediate neighbourhood. At the last annual meeting of the company, on December 10th, 1911, the Chairman, Mr. Francis Oats, referring to the question of the establishment of a university in Capetown, said:

"One purpose to be served as we understand it, is that of assisting to bring the two races, Dutch and English, into greater harmony. With the spirit which prompts that desire we are quite in accord, and we think it is appropriate that De Beers Company, who are a Colonial Company, should show our sympathy with this movement, and at the same time mark our appreciation of the accomplishment of Union by assisting to contribute towards the necessary funds. You are aware that certain profits of the Company derived from perfectly legitimate sources are used by the Chairman from time to time (and accounts are available at any time to show that the money is so used) for the benefit of objects outside the business of the Company itself, but which will be for the benefit of South Africa at large. Bearing that in mind, it appeared to the Board that it would be quite appropriate on their part to subscribe a portion of these funds towards the establishment of that university. Accordingly, the following letter to the Minister of Education has been sent:—'Dear Sir,—I am authorised by my Board to write you that they have resolved to set aside a sum of £25,000 as a contribution towards the proposed South African University on the assumption that the scheme will be settled to the satisfaction of those who have already so largely subscribed, and of the Government. I am, dear Sir, yours faithfully, Francis Oats, Chairman, Kimberley, December 10, 1910.' Well, we have taken that responsibility, and we believe that in doing so we have only carried out the wishes of our shareholders in thus showing our sympathy with that movement and our appreciation of the achievement of the Union of South Africa."

These remarks were punctuated with loud applause. A corporation which uses funds, legitimately obtained, voluntarily and generously for objects "outside the business of the company itself, but which will be for the benefit of South Africa at large," cannot justly be accused of being indifferent to what you term its opportunities and responsibilities.

It is hardly necessary to discuss the economic matter involved in your references to Rhodesian diamond mines. The policy of restricting output is obviously necessary if the production of diamonds is to remain one of the industrial assets of this country, and if every diamond mine that could be discovered were thrown open for producing purposes, the very people who hope to thrive by the process would, in an astonishingly short space of time, find their occupation gone.—Yours, etc.,

KIMBERLEYITE.

De Beers Defended.

To the Editor, *South African Mining Journal.*

Sir,—I hold no brief for De Beers, and it is possible that I also might find matter for regret in contemplating their position. But your remarks are obviously unfair, and are calculated not to injure their immediate object, but rather to damage the interests of South Africa from an overseas point of view. As the recorder and bolsterer of South African mining practice, why do you condemn a Board of directors for doing its possible best for its company's shareholders? Is it not common for zealous and conscientious trustees to avail themselves of every opportunity which offers to increase the value of the property they administer? You apparently do not suspect that the policy you deplore so vehemently has saved the diamond industry in South Africa from practical extinction. Such, however, is the case; for were De Beers to abandon their dictatorship and permit the full yield of the mines to be placed without restriction on the market, diamonds would become so nearly valueless as to make their winning an unprofitable occupation. On the other hand, the wisdom of limiting the output of diamonds, together with the rare shrewdness of the Syndicate's transactions have helped to maintain for the gem its high place in public favour; have supported Griqualand West through many drouthy years, have acquired Rhodesia for the Empire, have played their part in the building up of the gold mining industry of the Transvaal, and, incidentally, have netted immense profits for De Beers' shareholders. It is clear, then, that your

bête noir must pay huge dividends or none at all; and being faced by two such evils, how shall they be blamed for choosing discreetly? The acquisition by De Beers of other diamond propositions expressly for the purpose of closing them down is a point largely paraded by the many whose interests run counter to those of the Kimberley corporation. Admittedly one might cite several diamondiferous occurrences which would probably pay for exploitation, and which are made impotent by the De Beers grip; and some who grumble would doubtless be prepared to invest their money in proving them. But, however lamentable, the course adopted by the controlling Company must be continued, and competition must be eliminated so far as may be possible; this for the good of the industry, and, therefore, of the country. Moreover, it should be remembered that the wisdom of a policy is not necessarily impeached because it synchronises with its promoters' desire for personal gain.

My assertion that De Beers are not illiberal will be amply supported by figures to be found in any of their published annual accounts. Of course, no corporate body is strikingly philanthropical, and it may be urged that the company's larger beneficiaries should contribute more lavishly to the country's public charities, and to those other of our institutions designed for the public benefit. But who may interfere with the right of the individual to his own, or presume to define the degree of his benevolence? From a national standpoint it is just cause for commiseration that De Beers hold their lands and their mines under the old Free State titles, and are therefore exempt from any contribution to the public exchequer by way of royalty. Were it otherwise, the country would be entitled to at least one-half of the company's net profits. But no sane person would expect the shareholders voluntarily to surrender upwards of a million pounds sterling annually; and I may be forgiven for suggesting that in this connection your remarks savour unpleasantly of Market Square Socialism.

With the political equipoise of the De Beers Company and the Parliamentary placidity of its nominee to the Union Assembly, I have no concern. But I *do* deprecate the appearance in your normally dignified and generally reputable paper of immoderate expressions such as are to be found in the concluding paragraph of your article. The contempt expressed in your allusions to " tickey snatchers " and " penny bankers " is surely a trifle ludicrous when directed at a concern whose chief fault you have shown to lie in its conservatism, and whose blackest sin is a disinclination to nourish the syndicate-monger. Let me hint to you, sir, that when inclined—or perhaps impelled—to attempt criticism, it would be regarded a boon were you to tackle one or other of the deplorably numerous Rand companies whose methods lend themselves to dissection for the public good, and whose positions afford a wider scope for the exercise of your undoubted gift for opprobrious epithet.

Finally, I venture to remark that your disposal of the whole question of South African diamond cutting in one brief sentence is somewhat arbitrary; and I dare to hope that you will later have reason to write in more serious vein on that subject. There are, I know, many thinking persons conversant with diamond trade statistics who differ with Mr. Warington Smyth's dictum, and who believe that a diamond cutting industry could be established and made to thrive if there were fixed only a reasonable tariff for its protection. One-half per cent. export duty on rough stones and fifteen per cent. import duty on polished goods does not promise much for the Colonial diamond cutter. But reverse the position, charging 15 per cent. on the value of rough goods going out and letting the cut stones come in at the lower figure, and I fancy the " pioneer capitalist to big schemes of industry " would again occupy a prominent place in the esteem of some who now are bewailing his decay.—I am, etc.,

H.M.

[These letters raise so many issues and occupy so much space that a reply must be held over till next week.—Ed., *S.A.M.J.*]

Engineering Notes and News.

THE BRAKING OF HIGH-SPEED WINDING ENGINES.*—III.

A Timely and Practical Paper of Great Importance.

[By G. K. Chambers.]

It has, however, the following practical disadvantages:—(1) As the stator must be disconnected from the power line before it is connected to the direct current exciting circuit it follows that two levers are required, the one to operate the A.C. reversing switches, the other the direct current exciting switch, and these levers must be interlocked positively in such a way that neither lever can possibly be moved from the "off" position unless the other is already in that position. For hand operation this would present no particular difficulty, but it is not clear how such a system could be arranged for automatic emergency operation in the event of failure of the power supply. (2) With large A.C. hoist motors, which necessarily have small air gaps, the danger of a pull over due to unbalanced magnetic pull is very great when the stator is fully excited with direct current, the number of ampere turns being enormous. (3) The relation between braking torque and the amount of resistance in the rotor circuit is very complex, as by a decrease of resistance the braking torque may be increased or decreased, and *vice versa*, dependent upon the speed at which the hoist is running. The torque varies with the resistance with a constant speed and with the speed with a constant resistance. If, therefore, a driver when lowering a load at a certain speed on this system had his controller in such a position that the maximum braking point had been passed, and found that the braking torque was insufficient, it would be necessary for him to move his lever "towards" the "off" position in order to increase it; if, on the other hand, he had not reached the maximum braking point he would have to move his level "away from" the "off" position to obtain the same result. What would happen under such circumstances if the driver had allowed his hoist to overspeed through inattention or otherwise, and suddenly realising his error attempted to apply the power brake to its full extent can be better imagined than described. In view of these difficulties with hand application, those with automatic emergency application would appear to be almost insurmountable.

(j) Eddy current braking differs from other systems of electric braking in that it includes a piece of apparatus entirely distinct from the main winding motor; it is, however, a pure power brake and self-generative except as far as its excitation is concerned, although, as already indicated, this could be made self-generative also if it were worth while. There is nothing new in the principle of this type of brake, all integrating electricity meters of the rotary type embody such brakes consisting of metal discs rotating in permanent magnetic fields. Powerful electro-magnetic disc brakes on the same principle have been used for many many years as power brakes for electric trolley cars, and one of the earliest and perhaps most striking experiments in the electrical laboratory was the experience of the great personal effort required to rotate a disc in a magnetic field and the amount of heat generated in it. The application of this principle to the braking of hoisting engines on a very large scale was, however, first proposed and adopted in this country, and the special circumstances which led to this are perhaps of some interest. The conversion of four of the largest Whiting hoists on these fields from steam to electric drive was desired; these hoists winding a net unbalanced load of 10,000 lbs. of rock at a speed of 3,500 feet per minute from vertical depths varying up to 3,800 feet, and raising and lowering men at half speed. It was generally agreed that the Ward-Leonard system would best meet these conditions, but the consulting engineer at that time attached great importance to the retention of the side rods between the reel shafts, which made it necessary that the winding motors should be fixed on the shafts between the reels and the bearings, and not only was there insufficient room laterally for direct current motors on account of the additional width of the commutators, but there were other obvious practical difficulties which put the adoption of the Ward-Leonard system out of court. The engineers decided, therefore, to adopt the A.C. system, but at that time the question of the capacity of this system for lowering loads had become acute and it began to be realised that with a maximum lowering duty of (say) nine trips per hour the shifts could not be got down into or up out of the mine in anything like a reasonable time. The problem was solved by the suggestion of the eddy current brake, and it was finally decided to mount the induction motor on the leading reel shaft which is slightly inclined, and the brake on the rear wheel shaft which is horizontal. General views of one of these hoists after the conversion had been made clearly show the relative positions of the motor and brake. Subsequently two man hoists of similar capacity were required, and for the sake of uniformity they were ordered with similar electrical equipments. The brakes were originally ordered merely as speed limiting devices, and they were guaranteed to lower a load of forty-eight men continuously at a rope speed of 1,750 feet per minute, *i.e.*, half-winding speed; at that time there was no intention of using them as service brakes, nor were man winding speeds of 3,500 feet per minute even contemplated. The brake consists of a rotating field, of the salient pole type, of a standard A.C. generator, the yoke being a plain hollow iron box casting cooled with water circulation, the cooling water entering through a pipe at the bottom of the lower half of the yoke and rising through the pipes which break the horizontal division, discharging through the pipe at the top, and in doing so carrying away the heat generated by the eddy currents in the inner face of the yoke. In order to supply exciting current to the brakes, a 100 k.w. motor generator set has been supplied for each group of three hoists; it was originally proposed that these sets should be equipped with flywheels of sufficient capacity to allow of braking three lowering trips in the event of the failure of the main supply, but this scheme was ultimately abandoned in favour of two storage batteries of somewhat greater capacity, which under normal circumstances float across the terminals of the direct current generators. The power braking system is therefore quite independent of the main supply as lowering trips on all the hoists can be completed at ordinary speeds with perfect safety whether the supply is available or not, in fact, if necessary, lowering trips may be continued until the storage battery is exhausted as the full unbalanced load is sufficient to accelerate the hoist. The eddy current brake controllers are of the standard tramway type with magnetic blow-outs, and have five braking notches, the resistances, which are of the cast grid type, being apportioned to give 20, 40, 60, 80 and 100 per cent. of the excitation. The writer does not propose to enter into a discussion of the theoretical features of this class of brake as these also have been fully dealt with by Dr. Rosenberg in the paper above referred to; the theory advanced by him regarding the as-it-were automatic adjustment of the relations between the speed (or rather periodicity) of the brake and the resistance of the path in which the eddy currents circulate due to the use of cast iron is extremely interesting and well worth perusal. The curves show the braking effect of these particular brakes at speeds varying from zero to full speed, with 100 per cent. and 75 per cent. of full excitation respectively. The tests were made by driving the motor against the brake without the ropes on the drums, the readings of input to the motors were taken on a polyphase indicating watt meter, and the braking torques calculated from them, the efficiencies of the motor at various loads being known. The curves of braking torques must, however, only be taken as approximate, but they are probably near enough for practical purposes, especially in view of the fact that with the ropes on, the additional rope, shaft and headgear sheave friction will more than compensate for any errors in the assumed efficiencies at low speeds, and this is borne out by the result obtained when allowing an unbalanced load of five tons to run down the shaft against the fully excited brake, the rope speed of 150/180 feet per minute obtained under these conditions necessitating a retarding torque of about four and a half tons, which agrees very closely with the curve. Whilst the braking effect with 75 per cent. excitation begins to flatten at a rope speed of 3,000 feet per minute, it will be noted that with full excitation the torque is still rising rapidly at 3,500 feet per minute; it is very desirable that tests should be made above this speed, but unfortunately this is impossible with an A.C. motor. From tests which have been made experimentally with models, however, it appears that with full excitation the torques would continue to rise up to a speed equivalent to a rope speed of at least 6,000 feet per minute, and would probably not develop a drooping characteristic under a speed equivalent to a rope speed of 10,000 feet per minute, if then. For all practical purposes, therefore, there does not appear to be a critical point with this type of brake, and with a normal speed of 3,500 feet per minute there is an enormous margin of safety as the faster a runaway the greater the braking torque will be, which is of the course the ideal condition. The operation of the brake is extremely smooth and the retardation perfect; the writer recently made a succession of trips in order to obtain a personal impression of the effects of high speed braking on this system. The first trip was made with a lowering speed of 2,200 feet per minute when the current was cut off and the brake fully applied; the rope speed dropped to 500 feet per minute in 11 seconds, in a distance of 245 feet. The second trip was made hoisting at the same speed with practically the same result. The third trip was made with a lowering speed of 3,200 feet per minute (the maximum obtainable), and the rope speed dropped to 500 feet per minute in 13 seconds in a distance of 315 feet. A fourth trip was similarly made hoisting. Neither the writer nor his two companions suffered the slightest discomfort, although in the third and fourth trips the retardation must have reached the high maximum value of 10 feet per second, although there was an exaggeration of the feelings of bodily heaviness and ascension during the retardation period, and *vice versa*, which are usual with high-speed winding.

(To be continued.)

* Read before the S. A. I. of E.

Finance, Commerce, and Industries.

Standard Bank.

Periodically it is the practice with the directors of the Standard Bank for one of their number, accompanied by the Secretary, to undertake tours of the institution's principal branches. Mr. Robert E. Dickinson, who is also a director of Parr's Bank and the National Provident Institution, together with Mr. Francis Shipton, the bank's secretary, arrived for that purpose last week by the R.M.S. Walmer Castle. Advantage is naturally taken of these occasional visits to acquire at first hand knowledge of prevailing local conditions, while the opportunity is also afforded of meeting the bank's principal customers. Mr. Dickinson is making his maiden trip to the sub-Continent, but Mr. Shipton has been out before in company with Sir Charles Fremantle and Mr. Horace Peel. It will not be practicable on the present occasion to cover the whole of the bank's 200 branches, extending as they do from Capetown to Kampala, in Uganda, and Eldoret, in the East African Protectorate, both townships situated north of the equator. Nevertheless, all the principal places in which the bank is represented will be visited.

* * * *

Building Plans Approved by Municipalities.

Eight municipalities in the Transvaal Province during the month of September approved plans having an estimated value of £170,210, as against £180,837 for the month of August, showing a decrease of £10,627. The Cape Province approved plans having an estimated value of £38,562. The Durban Municipality passed plans having an estimated value of £32,046. The estimated values of buildings, the plans of which have been approved by the undermentioned Municipal Councils during the month of September, 1912, were as follows:—Johannesburg, £123,648; Boksburg, £1,695; Benoni, £12,135; Germiston, £4,072; Krugersdorp, £3,700; Potchefstroom, £1,510; Pretoria, £16,450; Roodepoort, £4,000; Queenstown, £250; Oudtshoorn, £1,050; Adelaide, £100; Montagu, £3,315; Graaff-Reinet, £400; Stellenbosch, £770; Capetown (July and August), £8,465; Woodstock (August), £2,247; Mowbray, £50; Claremont (August), £215; Simonstown (July, August, and September), £21,700; Durban, £32,046; total, £240,818. Tenders accepted by Government for public buildings during the month, and not included in the above amount, £39,358.

* * * *

Colonial Mutual.

Needless alarm has been caused by the publication locally of sensational news regarding the affairs of the Colonial Mutual, a company which has been transacting business in South Africa for over a quarter of a century. Years ago we had occasion to criticise the management of this office, when its accounts presented a less favourable appearance than they do to-day. But though conditions may not be bright as regards the prospects of policy-holders in the shape of profits (as was the case years ago), no apprehension need be entertained regarding the fulfilment of the contracts by the company.

* * * *

The Half-year's Finance.

The *Union Gazette* of the 18th inst. gives the Treasurer's statement of revenue and expenditure for the six months from the 1st April to 30th September. Receipts for the half-year are given as £8,473,583, against £8,333,850 for the first half of 1911, an increase of £139,733. As there has been a windfall of £150,000 to the Estate Duties this year, and there is also an increment of well over £100,000 to be considered in the Railway contribution to debt-interest, these figures seem to represent a substantial decrease in ordinary revenue. Taking this total of £8,473,583 in relation to this year's Estimates for the full year, it will be noticed that they exceed the half-year's proportion by over £300,000. The full estimate of revenue for the year is £16,288,000, half of which would be £8,144,000. Actual receipts have been £8,473,583, or £329,583 over the mark. It has, however, to be noted that several of the headings show receipts that argue considerable payments in advance, or beyond the half-year's quantum. Thus revenue from the diamond mines, under Mining Taxes, has been £411,922 for the half-year. The whole year's estimate is only £410,000, and it is too good to be true that revenue from this source should be in the process of doubling itself during the year. This item alone seems to be £217,000 in excess of the normal for the half-year. Gold mines, again, show £140,060 for the half-year, against £186,000 estimated for the full year, and one of the rare footnotes supplied by the Department explains that this includes "Bewaarplaatsen Receipts, which are carried to a separate account." Native taxes are also largely in excess of the half-year's proportion, and altogether it is quite impossible to deduce from these figures, as a whole, whether revenue for the full year is likely to exceed, or fall short of, the Estimates. Revenue from gold mines is set, for instance, at £1,000,000; only £231,000 has been received so far. Surely there is to be no great falling-off under this head? The only reliable sidelights thrown on the position are the increase under Railway contributions to debt-interest, and the windfall under Estate Duties, both referred to above, and the decreases or increases under such headings as Customs, Posts, Telegraphs and Telephones, etc. Customs returns for the six months have been £2,225,693. For the half-year of 1911 they were £2,240,668. This year shows a decrease, therefore, of £14,975. Estimates for the full present year were £1,405,000, the half of which would be £2,202,500. Receipts are, therefore, apparently £23,193 above the Estimates for the half-year. There is, however, no great general expansion of prosperity noticeable in these figures. Posts, Telegraphs and Telephones total £742,369 for the half-year. This is, certainly, £63,490 above the receipts for the half-year of 1911, £679,879. It is, however, £6,631 below the half-year's proportion of the estimates for the full present year, which proportion would be £749,000, the full estimates being set at £1,498,000.

New Patents.

515. Paul Abbot Talbot.—Improvements in steam boilers.
516. Junius Ford Cook.—Improvements in hydraulic classifiers and the like.
517. Lars Jensen.—Detachable socket and four bit drill.
518. Archibald McMullan and William Lippiatt.—Improvements in brakes for railway vehicles.
519. Archibald McMullan.—Improvements in rifle and gun sights.
520. Lancelot Ussher.—Improvements in the method of lighting fuses used in blasting operations.
521. Emil Deister and William Frederick Deister.—Improvements in concentrating tables.
522. Emil Deister and William Frederick Deister. Improvements in head motion of concentrating tables.
523. Ernest Rorive.—A pneumatic tool sharpening and gauging machine.
524. Johannes Ludowicus Steyn.—A new and improved vinegar and process for manufacture.
525. Isaac Bell.—Improvements in machines for aerial flight.
526. Herbert Clark.—Improvements in poultry houses and the like.
527. Valentine Sills Simpson.—Combined canvas water cooler and cooling chamber.
528. Ernest Lawrence Smith. Improved bolt and lock nuts.
529. James Watson and British Westinghouse Electric and Manufacturing Co., Ltd.—Improvements in and relating to liquid controllers for electric motors.
530. William Thomas.—Improvements in means for taking indicator diagrams from steam engines.
531. John Fraser Price. Improvements in devices for atomising or spraying liquids.
532. George Francis Jones and William Fleming.—Improvements in materials for allaying dust in mines and the like.
533. Benjamin Merwin Mitchell.—Improvements in rollers for endless belt conveyors.
534. Henry James Rees.—Improvements in or relating to the deposition of metallic salts from solutions containing them.
535. J. Stone & Co., Ltd., and A. H. Darker. Improvements in and relating to electrical installation for lighting, heating and ventilating railway carriages and for similar purposes.

SEPTEMBER GRADE, COSTS, AND PROFITS.

Analysis of the Gold Production for the Month

The usual monthly analysis of the gold production for September issued by the Chamber of Mines, is presented hereunder :—

THE WITWATERSRAND.

	Total value recovered.	Value recovered per ton milled.	Total working cost per ton milled.	Total working costs.	Working profit.	Working profit per ton milled.
	£	s. d.	s. d.	£	£	s. d.
1. Aurora West United ...	18,083	25 1	19 4	13,922	4,130	5 8
2. Bantjes Consolidated ...	36,382	31 4	24 2	27,699	8,110	7 1
3. Brakpan Mines	90,753	31 1	17 3	50,124	40,131	13 9
4. Cinderella Cons.	23,656	26 3	23 10	21,520	2,328	2 7
5. City Deep	72,284	38 5	25 11	47,969	22,186	12 0
6. City and Suburban ...	50,896	36 10	21 8	28,747	21,380	16 1
7. Cons. Langlaagte	32,164	30 11	22 4	21,753	10,411	10 8
8. Cons. Main Reef	32,185	29 11	19 6	20,980	10,787	10 0
9. Crown Mines	245,366	31 5	18 6	144,848	97,608	12 6
10. Durban Roodepoort ...	14,922	21 4	15 4	10,719	4,186	6 0
11. Durban Rood. Deep ...	36,938	30 1	24 7	30,171	6,255	5 1
12. East Rand Proprietary	240,931	33 4	21 4	150,456	87,502	12 5
13. Ferreira Deep	106,265	39 7	21 2	56,258	47,611	17 11
14. Geduld Proprietary ...	19,000	27 11	21 2	14,396	4,556	6 8
15. Geldenhuis Deep	72,526	29 10	26 8	64,216	7,422	3 1
16. Ginsberg	21,345	29 9	19 10	14,227	7,119	9 11
17. Glencairn Main Reef ...	16,927	15 3	13 5	14,001	2,926	2 10
18. Jumpers cum Treasury	13,504	41 2	40 8	12,088	1,503	5 1
19. Jupiter	48,475	24 8	18 2	35,640	8,078	4 1
20. Knight Central	28,501	25 4	20 5	22,999	5,211	4 7
21. Knights Deep	45,362	15 5	11 7	34,140	10,719	3 7
22. Lancaster West	19,756	19 5	21 11	21,359	*1,682	*1 9
23. Langlaagte Estate ...	63,975	21 6	17 4	45,777	17,500	6 8
24. Luipaardsvlei Estate ...	16,592	21 7	18 2	13,943	3,443	3 2
25. Main Reef West	28,583	31 10	22 0	19,789	8,429	9 5
26. May Consolidated ...	16,885	22 6	15 1	11,319	5,526	7 4
27. Meyer and Charlton ...	30,065	43 5	18 6	12,823	17,434	25 2
28. Modderfontein B. ...	56,711	35 8	16 7	26,435	29,407	18 6
29. New Goch	26,336	20 0	16 4	21,547	4,745	3 7
30. New Heriot	22,169	37 5	22 6	12,958	8,922	15 6
31. New Kleinfontein ...	68,002	28 3	19 9	47,760	20,015	8 3
32. New Modderfontein ...	91,725	45 0	20 7	41,620	49,035	24 4
33. New Primrose	36,250	28 0	14 2	17,568	18,740	15 2
34. New Rietfontein	19,595	25 0	21 1	16,582	3,015	3 10
35. New Unified	16,689	23 5	20 3	11,677	5,012	8 8
36. Nourse Mines	82,899	29 8	20 3	55,420	26,149	9 7
37. Princess Estate	25,920	26 3	25 3	24,580	1,249	1 3
38. Randfontein Central ...	259,944	25 4	17 6	176,200	80,606	8 0
39. Robinson	101,457	38 2	14 7	37,568	61,106	23 9
40. Robinson Deep	81,595	31 9	18 2	42,859	31,101	13 2
41. Roodepoort United ...	23,829	21 2	19 0	25,914	2,807	2 1
42. Rose Deep	89,708	27 10	16 8	53,827	34,830	10 10
43. Simmer and Jack ...	81,777	21 7	10 9	40,687	40,304	10 8
44. Simmer East	29,207	17 0	17 8	30,360	*1,494	*0 10
45. Simmer Deep	45,837	17 8	15 9	41,033	4,283	1 8
46. Spes Bona Tribute ...	6,482	21 9	—	—	—	—
47. Van Ryn	54,902	28 5	16 0	30,934	24,004	12 5
48. Village Deep	75,342	31 7	20 0	47,274	26,999	11 5
Village Main Reef ...	84,768	39 1	16 11	36,234	46,584	21 8
50. Vogelstruis Estate ...	11,894	20 11	20 1	10,750	1,177	2 2
51. West Rand Central ...	3,653	37 4	32 6	3,105	547	5 9
52. West Rand Cons. ...	39,198	29 9	23 11	31,058	8,057	6 2
53. Witwatersrand	45,825	23 1	13 6	26,794	19,031	9 7
54. Wit. Deep	57,332	30 5	19 7	36,864	19,822	10 6
55. Wolhuter	37,779	27 3	17 8	24,437	15,008	10 11
Miscellaneous producers	19,239	—	—	—	—	—
Witwatersrand totals	3,043,475	28 7	18 8	1933808	1040820	16
			54 cos.	54 cos.	54 cos.	54 cos.

The apparent small disagreement between working costs and profits per ton milled and value per ton is due to inclusion of value won from accumulations and by-products.

OUTSIDE DISTRICTS.

HEIDELBERG—						
1. Nigel	18,546	28 2	23 2	14,965	3,875	5 8
2. Sub Nigel	8,636	37 2	29 0	6,741	1,763	7 7
BARBERTON—						
3. Barrett	990	7 0	—	—	—	—
4. Sheba	13,724	46 10	28 5	8,331	5,226	17 11
5. Sheba (Rosetta)	1,461	32 8	—	—	—	—
6. Worcester	4,719	19 1	—	—	—	—
LYDENBURG—						
7. Glynn's Lydenburg ...	8,623	48 7	19 5	3,455	4,942	27 10
8. Transvaal G.M. Estates	42,915	55 11	21 9	15,960	24,857	33 10
Miscellaneous producers	33,757	—	—	—	—	—
Total (outside districts)	133,871	38 9	23 9	49,455	40,163	19 3
			5 cos.	5 cos.	5 cos.	5 cos.
Grand totals	3,176,846	28 10	18 9	1983263	1030983	10 3
			59 cos.	59 cos.	59 cos.	59 cos.

A comparison of value recovered per ton milled, working costs and profits per ton with August shows that the value recovered on the Witwatersrand for September was 28s. 7d., or 2d. per ton less than in August. Working costs in August were 18s. 10d. and costs for September are the same; for July, 18s. 8d.; for June, 18s. 6d.; for May, 18s. 10d.; for April, 18s.; for March, 18s. 11d.; for February, 19s. 2d.; for January, 18s. 10d. For January, 1911, the tonnage milled was 1,855,232; for February, 1,712,19[illegible] tons; for March, 1,960,678 tons; for April, 1,926,583 tons; for May, 2,002,916 tons; for June, 1,989,559 tons; for July, 2,095,220 tons; for August 2,107,809 tons; for September, 2,037,329 tons; for October, 2,063,900 tons; for November, 2,089,387 tons; for December, 2,030,437 tons; for January, 1912, 2,067,161 tons; for February, 1,980,396 tons; for March, 2,163,998 tons; for April, 2,059,562 tons; for May, 2,177,34[illegible] tons; for June, 2,110,657 tons; for July, 2,149,785 tons; for August, 2,121,455 tons; and now for September, 2,031,295 tons. In the outside districts the total tonnage milled was 50,298, making a total for the Transvaal of 2,131,593 tons.

The Position of Grootvlei Proprietary Mines.

The report of the directors, submitted to the shareholders at the fifth ordinary general meeting of the company, held on the 25th October, stated: "Shaft sinking has not been resumed during the past year, financial considerations not permitting, and all work has been in abeyance on the property. The financial position of your company, as will be seen from the accounts submitted, remains practically the same as at the end of the previous financial year, and beyond the necessary charges for caretaking, insurance, etc., no expenditure has been incurred. In their last report your directors advised you that they were waiting for an opportunity to place the company in a financial position to resume work, and during the past year no opportunity of doing so presented itself. Your Board are glad, however, to call the shareholders' attention to the greater and more favourable attention now being paid to the further east section of the Witwatersrand, due entirely to the consistently good results attending development work being prosecuted by the companies holding mining ground on the farms Brakpan, Modderfontein and Geduld, and the large and increasing scale of profits being earned by these companies who have reached the output stage. The past year has seen the commencement of milling operations by the Brakpan Mines and the Modderfontein B. Gold Mining Company, and the very satisfactory profits earned by those companies since the start of their reduction plant is being reflected in the rise in these companies' shares. Your directors confidently anticipate that the time is not far distant when the investing public will appreciate the fact that the further east section of the Rand offers a field for investment second only to the central section, and that there they have opportunities for investment that are not available in the producing mines of the Witwatersrand." At the annual meeting the Chairman spoke in a similar strain, and reviewed the prospects of the company at length.

The best "Reef Traveller" is the *South African Mining Journal*.

QUARTERLY REPORTS.

Goerz Group.

The following reports of operations for the quarter ended the 30th of September on the mines of the Goerz Group have been issued:

MAY CONSOLIDATED.

From 46,670 tons milled, the value of the gold recovered was £52,319, or 22s. 5.207d. per ton. Working expenses absorbed £31,782, or 14s. 10.866d. per ton, which left a working profit for the quarter of £17,567, or 7s. 6.341d. per ton. Sundry revenue brought in £164, and interest £450, making a total of £52,964. After deducting the sum of £6 there is a balance for the period of revenue and expenditure account of £18,176.

PRINCESS ESTATE.

From 58,550 tons milled, the value of the gold recovered was £787,001, or 26s. 10.599d. Working charges amounted to £75,035, or 25s. 7.575d. per ton, which left a working profit of £3,665, or 1s. 3.024d. per ton. Sundry revenue brought in £1,135, and interest to debit on advances was £837, which left a balance profit for the quarter of £3,963. The balance of revenue and expenditure account, after inclusion of some capital expenditure was £2,068. On mine development 2,447 ft. was accomplished. The footage driven, risen and sunk on the reef and sampled was as follows: South Reef, 1,605 ft., averaging 9.23 dwts. over 25 ins.; Main Reef, 565 ft., averaging 6.2 dwts. over 39.57 ins. It is estimated that the payable ore (based on the milling width) developed by the above footage is: South Reef, 56,730 tons; Main Reef, 12,783 tons; total, 69,513 tons. These figures are subject to recalculation at the end of the year when block values are made out.

GEDULD.

From 41,980 tons milled, the revenue from gold won was £57,196, or 27s. 2.99d. per ton. Working expenses amounted to £44,157, or 21s. 0.447d. per ton, which left a working profit for the quarter of £13,039, or 6s. 2.543d. per ton. The balance of working profit for the quarter was increased by sundry revenue to £15,402. The revenue and expenditure account, mine development, shaft sinking, buildings, and plant charges leaves the revenue side of the account short for the three months by £4,233. On shaft sinking at No. 2 main incline 271.5 ft. were sunk, and on mine development, driven, risen, and sunk, there was 3,488.5 ft. accomplished. The footage sampled on the reef for the three months was 2,515 ft., and the assay values over good stretches excellent.

LANCASTER WEST.

From 60,120 tons milled the revenue from gold won was £63,729, or 21s. 2.406d. per ton. Working charges amounted to £64,266, or 21s. 4.55d. per ton, which left a loss for the quarter of £537, or 2.144d. per ton. The debenture service called for £1,757. Sundry revenue brought in £1,211, which reduced the loss to £1,084. The revenue and expenditure account for the three months shows the total expenditure to have been £1,456 more than the receipts. The mine development was as follows: Botha section, 420 ft.; Battery section, 1,288 ft.; totals, 1,708 ft. The ore (based on the milling width) developed by the above footage is: Tons developed in Battery section, 10,094; payable, 9,244 tons. The footage driven, risen, and sunk on the Battery section and sampled totalled 695 ft., averaging 9.17 dwts. over 28.71 ins., and on the Botha section 200 ft., averaging 11.08 dwts. over 29.98 ins. These figures are subject to re-calculation at the end of the year, when block values are made out. It will be noted that, as compared with the report for the previous quarter, the debenture liability has been reduced as follows: Balance as per report for quarter ended 30th June, £110,080; less drawn for redemption on 1st July, £11,300; balance as above, £98,780. The results for the current quarter have been affected by a shortage of native labour, particularly in September. The position in this respect is now satisfactory.

Professor Hahn, of Capetown, says: "The production of tobacco dip and nicotine in South Africa from South African grown tobacco to be used in the first place in South Africa for the improvement of wool, is a truly national industry which should obtain every support and promotion at the hands of the farmers and the Union Government."

Automobile Notes.

The Tyre Question.

The tyre question seems the most important of all to the South African motorist, owing to the conditions imposed being probably more severe in this country, taken as a whole, than is the case in other parts, where the utility of the automobile is sufficiently recognised to warrant comparisons being made. Tyre discussion, therefore, is invested with more than a passing interest, and any considerations, from an economic standpoint, are naturally welcomed by the motorist, hence the reference from time to time in these columns to this vexed question. An expert, who has given serious and unremitting attention to the subject of tyres, is of opinion that much better results would be obtained were simple, though at the same time highly essential, precautions observed, for example, in the matter of applying clutch and brakes; due regard to alignment of wheels; periodical examination of all tyres for foreign substances, such as nails, etc., embedded in the tread, and the filling up or vulcanising of cuts as they appear. Advice to run tyres in alternate directions frequently may also be included in the provisions for the benefit of those endeavouring to avoid excessive wear and tear. Despite the efforts of the South African Society of Motor Traders, much that has slight claim to recommendation in motor tyre production finds its way to the South African market, and the matter of selection for this reason is rendered all the more difficult. The purchaser, it would appear, must therefore be largely guided by the experience of others, which constitutes a criterion that few will be prepared to dispute. The figures supplied, some little time ago, by two dozen private users of Dunlop tyres are truly remarkable, and serve to illustrate this point. The highest total reached in the individual life of a tyre of this make was 23,000 miles, next in order being 20,000, and so on down to the comparatively small mileage of 10,000. These wonderful records would be scarcely credible were the names identified with the performances other than those of prominent motorists in the United Kingdom, whose integrity is unimpeachable. Naturally the general conditions governing these achievements differed considerably from those obtaining, in the ordinary way, in South Africa; at the same time, it may be remarked that the pride of place was accorded to an Irish motorist, whose running was performed, for the most part, in vicinities where roads are the reverse of ideal, and with which those of this country might very favourably compare.

The repetition of these facts is in no way intended as an advertisement, but merely calculated to show what tyres of approved tyre, when due care is exercised, are capable of affording. Experience of a personal and extensive nature to that described cannot be gained by the average motorist in regard to each make of tyre, for obvious reasons; the buyer, however, may be advisedly influenced in selection by similar tests of endurance, *e.g.*, those recently attempted in the United Kingdom, and which were attended with surprising results. The economy of adopting larger tyres on cars than has been the case in the past has also been referred to in other numbers; the importance of the question, however, has not been given the consideration it deserves. And while on this subject, it is interesting to mention that twin tyres are enjoying a measure of popularity on the Continent, and several French makers are fitting them on comparatively small cars, a departure which they maintain amply justifies the experiment from an economic standpoint. The advantage in regard to safeguarding from puncture is at least obvious, it being remote that both tyres on a particular wheel should puncture during the course of a daily run.

Hill-climbing Efficiency.

A Home journal is responsible for the statement that "the craving for speed on the level is dying out," and maintains that "hill-climbing efficiency is one of the characteristics which appeals most to the motorist." The exhilaration of climbing a hill at a good speed, which, incidentally, incurs little risk, in that the car can be brought to a stop within a very short space, is certainly an experience, which a car incapable of affording in an undulating country such as South Africa, will find great difficulty in establishing a reputation. Manufacturers, however, are keenly alive to the importance of attaining this efficiency, and even the smallest cars to-day can negotiate formidable grades on low speeds. In most selections the gradient is steep throughout, and only the low speed is called into requisition in the average hill-climbing competition. The

value to the owner-driver would be considerable were hills selected which might be negotiated entirely on high speed, as the pleasure of hill-climbing centres largely therein.

The Value of Racing.

Having in view the close of the T.A.C. racing season, and in a reflection on the meagre support accorded the club in the several competitions, the question naturally suggested in the indifference displayed appears to be: "Does racing pay?" to which one can only reply in the affirmative, recognising the business directly attending the successes achieved by particular machines, cases being on record where immediate sales were effected on the publishing of results of competing cars. The reputation on the track, which so often precedes a car to South Africa, has again to be established, on introduction to these parts, under conditions far more exacting than those at Home, and its performance, therefore, is watched with much interest, and influences its future, more or less, in point of sales. The value which attaches to racing is clearly shown, for example, by the large number of entries received for international events, such as the Grand Prix, the popularity of which is undoubted, and should convince the most sceptical of South African motorists on the point under discussion. The performance of a car in a racing contest very often decides a purchaser in its favour or otherwise, and it would be well to remark, for the benefit of traders, that the interest in the several events organised by the T.A.C. is by no means confined to club members, but is shared by a large number of motorists in no way identified with the Association, who, by the way, are at a loss to account for the non-representative nature of the various competitions.

"Here and There."

The T.A.C. motoring gymkhana, being held to-day on the Wanderers ground, will eclipse in interest anything yet attempted in this direction. The participation of the military in the event is an innovation for which the club are to be complimented, while the exhibition of Swedish drill cannot fail to be appreciated. A representative gathering of motorists is expected. Competitors must be on the ground by 1.45 p.m.. Cars will enter by the Wolmarans Street entrance. A charge of one shilling is being made to the ordinary public; club members will be admitted free of charge. The first event will start at 2 p.m.

"The Cyclopædia of Automobile Engineering," full particulars of which can be obtained from the Earle Company, Ltd., Johannesburg, is a high-class general reference work on the construction, operation, and care of gasoline, electric and steam automobiles, commercial vehicles, motor cycles and motor boats; types of automobiles; explosion motors; driving; garages; repairs, and aeronautics. Profusely illustrated, this expert work should be in the hands of every practical motorist.

* * * *

The inflated price of petrol is still a matter of serious consideration to the South African motorist, who, with the British consumers, equally suffers from the monopoly which the few great firms who control the trade enjoy. The advice of the *Daily Mail* some time ago was sound, when that authority suggested that a determined effort should be made to augment the output of petrol from the many vast oilfields within British territory, and mentioned the exploitation of fields where deposits of petroleum existed. Among the fields awaiting development the paper drew attention to those of South Africa, Canada, New Zealand and others, and were such a course adopted the price of the motor spirit would be permanently reduced.

* * * *

The mail to hand contains accounts of further successes scored on Wakefield "Castrol." The cars which came in first, second, and third in the O'Gorman Trophy were exclusively lubricated with this famous lubricant. An additional interest, by the way, attaches to this competition, insomuch as it has again been won by the redoubtable Vauxhall, this being the fourth year in succession. The winning car this year showed an amazing turn of speed, averaging 92½ miles per hour. Out of eighteen place competitors covering the events in the O'Gorman contest, no less than fifteen were lubricated with "Castrol."

The automobile catalogues for the season 1913 contain many changes which, however, are mainly improvements in design, aiming at increased reliability and comfort, a reduction of wear and tear, and a general cheapening of running costs. It is noticeable that several manufacturers have kept the foregoing features before them, and that the atttainment of great speed has been, so to speak, relegated to a plane of secondary importance. Simplicity of over-hauling, will, in addition, be embodied, in characteristic fashion, in the 1913 models.

* * * *

The petrol tram car provides a form of mechanical traction of which much that is favourable could be written. Its operation is being watched with interest in many parts, and opinions largely agree on the rapidity and smoothness of its acceleration. An important feature, which distinguishes the petrol motor from the electrically-driven car is the pleasurable absence of the syren-like noises familiarly associated with the latter. Of pleasing appearance, the petrol-engined car will eventually supersede all those of the horse-drawn nature.

* * * *

A Home journal, commenting on the increased cost of petrol, was of opinion that the position in that commodity, being so freely criticised, was brought about by a considerable decrease in the imports of the spirit. The Board of Trade returns, however, show that the reverse is the case, a period of three months of the present year showing a decided increase in the imports over the corresponding quarter for 1911.

* * * *

The manufacturers of the Sankey steel wheels are confident of their adaptability in point of the peculiar conditions to which wheels are subjected in South Africa. These fitments are in no way affected by climatic changes; have no spoke sockets to work loose; and no grooves or corners to collect dust. Their strain-resisting qualities have long been recognised, and the most formidable road mishap leaves them practically inviolate. Each wheel is carefully tested before leaving the factory with a force of 6,500 lbs., a weight which one might easily suppose would break the strongest wheel manufactured of this type.

Our Majority Number.

The sale of our Special 21st Anniversary Number has exceeded all records and expectations, and it is possible that many on the mines and in the outside districts who have not yet secured a copy will be disappointed, unless they send in their orders to the Central News Agency without delay. Owing to the size of the volume, no second edition can be printed, and the present issue is already in danger of exhaustion.

INVESTORS' DIARY.

The following company meetings have been announced:—

Nov. 2.—Sakalava and Bongolava Oil Syndicate.
Nov. 6.—New Modderfontein.
Nov. 22.—Main Reef West; Consolidated Main Reef.
Nov. 27.—New Boksburg G.M.; Rand Klip.
Nov. 28.—Transvaal and Delagoa Bay Investment Co., Ltd.
Dec. 20.—Breyten Collieries; Elandsfontein Estate Co.

Situations Wanted.

MINING ENGINEER, aged 32, holder of 1st class English and South African Certificates of competency as Manager (coal), desires appointment. Would not object to portion of salary being based on working results.

N., Box 381, PRETORIA.

The Sakalava and Bongolava Oil Syndicate, Limited.

Notice of Extraordinary General Meeting.

Notice is hereby given that an Extraordinary General Meeting of the Shareholders in the above Syndicates will be held in the Grand National Hotel, Rissik Street, Johannesburg, on Saturday evening, November 2, at 7.15, for the following purposes:—

(1) To confirm the resolution, passed at a previous meeting, to adopt and ratify the provisional agreement, dated October 1, 1912.

(2) Short address by Mr. W. H. Dufty prior to his departure for Madagascar.

(3) Directors' Report.

(4) To consider and, if thought fit, to hold this Syndicate's interest in the new Flotation for a period of 10 months from date of registration of the new company.

(5) And such other business that may be brought forward.

By Order of the Board,

J. JEFFREY, Secretary.
C. W. HERALD, Secretary.

NOTE.—A full notice of these meetings has been posted to each registered shareholder, and all shareholders are requested to attend.

The Week's Company Meetings.

JUMPERS G.M. CO.

Substantial Profit.

Closing Stages.

The twenty-third annual general meeting of shareholders in the Jumpers Gold Mining Co. was held on Tuesday. Mr. H. O'K. Webber presided, and there were present Messrs. S. C. Black, W. T. Graham, Comte F. de Fecrieres, J. E. Jones, B. Moses, E. Renaud, H. P. Rogers, E. Rothschild, and F. Elkan, representing 23,290 shares out of the total issue of 100,000.

Chairman's Speech.

The Chairman said: Gentlemen,—The report and statement of accounts before you show the results of the operations of your company during the year ended the 31st July, 1912. During the year under review your company has earned a net profit of £13,753 16s. 5d., to which must be added sundry receipts amounting to £314 4 10d., and a sum of £8,440 0s. 5d., un appropriated balance carried forward on the 31st of July, 1911, making an available total of £22,508 1s. 8d. Out of this sum £4,377 19s. 4d. was set aside as a reserve fund in terms of our agreement with the Treasury Gold Mines, Ltd., £1,622 16s. represents the estimated amount due in respect of profits tax for the year, £7,934 8s. 9d., was appropriated on account of the loan to the Benoni Consolidated Gold Mines, Ltd., which is referred to in the directors' report, and £125 12s. 11d. was written off certain mining participations acquired during the previous fiscal year which were found to be of no value and consequently abandoned. This left a balance to the credit of appropriation account of £8,447 4s. 8d., which has been carried forward. For details of the operations carried on in the Jumpers and Treasury sections during the year I will refer you to the general manager's report. From this you will see that 32,744 tons of rock were received from the Jumpers section and 88,620 tons from the Treasury section. In addition to this a certain amount of development was done in each mine and old drives were reopened and retimbered.

High Costs.

The costs have been inevitably high, but it is impossible to make any comparisons whatsoever. It is estimated that over 28 per cent., or over 47,000 tons, of the ore mined was sorted out underground, both with the object of avoiding the cost of hauling this waste rock to the surface sorting station and in order that packing might be available underground to take gradually the weight of the roof of the mine as the pillars are withdrawn. When I tell you that the average width of reef in the stopes mined during the year was 16.9 inches, that as much as £5,832 7s. 8d. worth of mine props, were used during the year in order that not a payable ton might be left behind, that we have been obliged to haul from four shafts, you will agree that the total cost of mining, hauling, pumping and transport to the mill of 14s 7d. per ton mined and 22s. 9d. per ton milled was not excessive.

Last Ton of Payable Ore.

Your manager had hoped that his previous forecast of the quantity of payable ore left in the Jumpers Mine would be realised, but unfortunately certain blocks of ore on being stoped were found unpayable in the centre of the blocks. It is therefore anticipated that the last ton of payable ore may be drawn from the Jumpers Mine at the end of the year. The Treasury section will continue longer, but it is extremely probable that at the next annual meeting your chairman will have to report the exhaustion of the payable ore. To compensate for the disappointment experienced in regard to the Jumpers section I am able to state that whereas it was estimated two years ago that there were 42,000 tons of accumulated slimes left, we had actually treated 52,276 tons up to the 31st of July, 1912, at a profit of 4s. 4.36d. per ton, and there were at that date about 10,000 tons yet to be treated. I may state that all possible economy in working costs and other charges is being practised (including the abolition of the salary of the managing director), in order that it may not be said, when the Jumpers and Treasury Mines are finally closed down, that there is a ton of payable ore left behind. Much credit is due to your general manager, Mr. Richards, and his staff, for the manner in which they are performing the difficult and anxious task of gradually withdrawing the natural pillars and supports and extracting every payable ton of ore.

Benoni Mine.

In regard to this company's holding in the Benoni Mine, I would refer you to the report of the proceedings at the last annual meeting of that company. A copy of the report has been forwarded to each registered shareholder of the Jumpers Company, and it speaks eloquently for itself. In view of the proposed amalgamation of the Benoni Company with the Apex Mines the terms of which are still under discussion, I do not think that any good purpose would be served by alluding further to the subject. No one regrets more than your directors the circumstances which have led to the cessation of the operations of the company. The good opinion of the mine formed by your directors on the best expert advice at the time when they first recommended this investment to the shareholders of the Jumpers Company has been fully borne out by the milling operations that took place during the months of December, January, February, March, and April last. The estimate of the recovery value of the ore reserves has been fully realised, and the results showed that there are many mines on these fields making good profits out of ore of a lower grade than the pay limit of the Benoni mine, and the Benoni report discloses that the failure of the cyanide plant was entirely responsible for the present position of inactivity. I have alluded to the loan which your company made to the Benoni Company in conjunction with two other participants at a time when it was urgently required to bring the company to the producing stage. The loan is secured at present by a second mortgage on the property and assets of the company, and it is anticipated that the scheme which will shortly be submitted will embody means for its repayment. Before closing I should like to acknowledge the good services rendered to your company by your general manager, Mr. S. Richards, and his staff, and to congratulate them on their success in prolonging the life of your company far beyond what could reasonably be expected to have been its reasonable period of existence.

I now formally move the adoption of the reports and accounts before you.

Mr. Graham seconded, and the motion was carried.

Messrs. S. C. Black and E. Friedlander were re-elected directors, and the appointment of Mr. E. J. Renaud to the board was confirmed. Messrs. Dold and Ablett were re-elected auditors, and their remuneration was fixed at one hundred guineas each.

KNIGHTS DEEP.

Working Costs Reduced.

Simmer and Jack Purchase.

Important New Proposals.

The annual general meeting of shareholders of the Knights Deep Ltd., was held last week in the boardroom, Consolidated Goldfields Building. Mr F. D. P. Chaplin, M.L.A., presided, and there were also present Messrs. W. S. Smits, D. W. Rossiter, J. E. Kent, A. G. Gill, F. Boerekel, F. Leslie Brown, H. H. Oldroyd, R. Parnell, and J. D. Low, secretary, representing personally and by proxy 472,585 shares, out of an issued capital of 643,526 shares.

Chairman's Speech.

The Chairman, in moving the adoption of the report and accounts, said: The report and accounts before you show that during the twelve months ended the 31st of July, a profit on working was made amounting to £216,464, which with the addition of sundry revenue received from rent, interest, etc., made a total profit of £224,830. The average value of the ore treated was less than that of the previous year by 2s. 7.639d. and this reduction was only partially counterbalanced by the reduction of 4.203d. in working costs to 11s. 1.385d. per ton and by an increase of 32,030 tons in the tonnage milled. The net result therefore was that it was possible to distribute in two dividends of 15 and 12½ per cent. the sum of £176,969, as against £225,234 distributed in the previous year. Certainly this result was not as satisfactory as we had hoped would be the case, though you will perhaps remember that at the meeting which took place this time last year I drew your attention to the very low average values with which we have to deal, and

pointed out that the average yield per ton crushed during August and September, 1911, the first two months of the financial year, the results of which we are now considering, was only just over 18s. 3d. At that time it was hoped that this figure was appreciably below normal, but as you will see from the report of the superintending engineer the average for the twelve months under review was only 18s. 5.119d., a figure which, it is obvious, affords very little margin for averaging temporary fluctuations, shortage of labour or other adverse circumstances. As regards the accounts, you will see that property stands at the same figure as last year. Expenditure on equipment shows an increase of £12,671 due to the additions and improvements of which a list is given in the manager's report. Stores and materials on hand show an increase of £9,865 as it was deemed advisable to carry a somewhat increased amount of certain stores and material as a precaution against inconvenience resulting from the continued strikes in England. Now that, in consequence of the arrangement to which I shall presently refer, we have available the stores belonging to the Simmer and Jack properly, this amount will be gradually reduced.

Position of Investments.

Investments are practically the same. We have received a dividend for the period ended the 31st of December, 1910, on our holding of 6 per cent. preference shares of the Victoria Falls and Transvaal Power Co., the supply of power from which company has been satisactory, and I understand we are likely to receive before long a dividend on our shares in the Breyten Collieries, which have been earmarked as an investment for our renewals fund.

On the other side capital remains the same. During the year the debenture debt was reduced by the redemption of £23,500 debentures, leaving £94,100 still outstanding. Provision for additions to and renewals of machinery, plant and buildings stands now at £29,354 after deducting an amount of £14,075 charged to working expenditure and revenue account. £17,696 was appropriated for this purpose during the year, being equal to 10 per cent. of the amount distributed in dividends, while £12,671 has been written off for additions to plant. £143,480 appears as due to sundry creditors, out of which dividend No. 14 of 12½ per cent. has been paid, absorbing £80,440, £15,678 has been reserved for profits tax, £431 for debenture interest accrued for the month of July, and the balance consists of open accounts for wages, etc., since closed. The balance on appropriation account carried forward is £82,926, which is practically the same as last year.

Working Costs.

The working expenditure and revenue account shows the value of the gold recovered, including rebate of freight, was £634,984, a decrease as compared with last year of £46,741. Working expenses, including the sum of £14,075 expended on renewals and replacements of machinery and plant to which I have already referred, came to £418,519. Profits tax, debenture interest and charges, and depreciation of live stock, etc., absorbed £22,999, against which we received miscellaneous revenue amounting to £8,365, leaving a balance to be carried to appropriation account of £201,830. This with the balance at 31st July 1911 enabled us to pay the two dividends, absorbing together £176,960, to provide for the annual redemption of debentures and to carry forward practically the same balance as last year. Full particulars of the operations at the mine are given in the reports of the acting superintending engineer and the manager. The most satisfactory feature I think is the further reduction of working costs from an average of about 11s. 8d. per ton for the year ending 31st July, 1911, to 11s. 6d., or, exclusive of expenditure on renewals, to 11s. 1d., a reduction of 4.203d., a result which after making full allowance for certain conditions favourable to cheap mining is, I think you will agree, highly creditable to the management. These are the points of most interest in regard to the operations of the year under review.

Destructive Fire.

Since the close of the financial year on the 31st of July certain events have occurred which have materially affected the position and prospects of your company. In the first place on the 12th of August the crusher station of the joint plant operated by the Knights Deep and Simmer and Jack East Companies was completely destroyed by a fire, the origin of which has never been ascertained. In the ordinary course this would have entailed the suspension of all milling operations for some considerable time, as much of the new plant required to replace the crusher station would not have been procurable in South Africa. Fortunately, however, your directors had some time before sanctioned the erection of a new crusher station of a more modern and efficient type than the old one and designed to effect an appreciable reduction in the operating costs. This new station was nearly completed at the time of the fire, and thanks to the energy displayed by the technical staff, was placed in commission after a comparatively short interval. The dislocation of work and the expense entailed were naturally reflected in the results for the months of August and September, the profits for which were only £8,692 and £11,026 respectively. The new station is now working quite satisfactorily. The plant destroyed was insured, and the amount involved has been received from the insurance company. In addition we had a claim, which has also been settled, under a policy of insurance of profits and standing charges.

Simmer and Jack East Purchase.

More important still is the purchase, of which shareholders have already been informed by circular, of the assets and undertaking of the Simmer and Jack East, Ltd., in liquidation. As you will remember, this company and the Simmer and Jack East have since the inception of their reduction operations been the joint owners of the reduction plant situated on the Knights Deep property, and for some time past the Knights Deep has leased from the Simmer and Jack East seventy stamps and accompanying treatment plant of the portion belonging to that company. Owing to the broken nature of the ground and other causes the Simmer and Jack East Company failed to make sufficient profits to provide for the interest and redemption of its debentures. Consequently in November last the company was placed in liquidation, and in due course the liquidators proceeded to sell the property by auction. Under these circumstances your director had for some time under consideration the question of the advisability of acquiring the property at the sale if it were possible to do so at a reasonable price. The superintending engineer after careful investigation advised that this course would be to the advantage of your company for the following among other reasons, viz., that your company would be enabled to increase its crushing capacity without incurring any large capital expenditure, that the greater tonnage crushed and the saving in supervision and other expenses would tend to maintain a low rate of working cost and would thus render it possible to mill a large amount of ore from the Simmer and Jack East property which that company working separately and crushing a smaller tonnage would be unable to treat at a profit. In this connection it may be observed that during the twelve months ended the 31st of July last while the Knights Deep Company crushed, as already stated, 727,700 tons at an average cost of 11s. 6.030d. per ton, the Simmer and Jack East crushed 379,700 tons at an average cost of 15s. 5.014d. per ton. It could, therefore, in the opinion of the superintending engineer, be safely assumed that the cost if the two properties were worked as one, would, assuming reasonable labour conditions, be gradually brought down to a figure exceeding but little the average cost of working on the Knights Deep, while this reduction in the cost and the consequently lower pay limit would tend to increase the life of the mine even with the increased tonnage to be milled.

Important Agreement.

Your directors accordingly approached the Consolidated Gold Fields of South Africa, Ltd., who are by far the largest shareholders in your company, with the result that an agreement was entered into by which the Gold Fields agreed to advance for a period not exceeding twelve months and without interest sufficient money to enable your company to bid for the property up to a certain price. During this period of twelve months the agreement provided that the two properties should be worked as one, a proportion of the profits obtained to be paid to the Gold Fields in lieu of interest on their loan. Within twelve months your company can call on the Gold Fields to purchase the property in full satisfaction of the advance, or can decide to retain it permanently, and in that case repay the advance by the issue to the Gold Fields of 100,000 shares. It appeared to your directors that this arrangement was a very favourable one to your company, seeing that it ensured to us a period of twelve months during which the advantages of the scheme could be tested in the most effective way, practically the only risk or expense incurred being the cost of transfer. It was therefore decided to bid for the property, and at the auction sale held on the 26th of September the property was acquired for the sum of £250,000. One-third of this amount, according to the conditions of sale, became payable at once, and was accordingly borrowed from the Gold Fields, the remaining two-thirds is payable on the 27th of January next

As from the 1st of this month the two properties have been worked as one, in terms of the agreement. As far as can be ascertained, all the arrangements are working as smoothly as could be expected, and the cost of working should gradually reach the level anticipated. Under the articles of association of the company the consent of an extraordinary meeting of shareholders will be required to enable the directors to give full effect to this agreement, and notice of the same will shortly be given.

New Proposals.

In view of the highly-developed position of the mine as described in the superintending engineer's report, which is now before you, and the advantage to be gained by lowering the pay limit to some extent, your directors have lately been considering a posal by the superintending engineer to provide additional tube mills and treatment plant sufficient to permit of the tonnage capacity being raised to an average of 103,000 tons per month, and of the treatment being carried out on the best possible lines. The money required for the purchase and installation of this plant will be provided partly out of the insurance money received in respect of the crusher station recently destroyed and partly out of the proceeds of the gold estimated to be recovered from the existing mill plates. The new installation, designed in accordance with the most modern practice, will render these mill plates unnecessary, and the company will therefore be able to recover forthwith the gold therein contained which would otherwise have lain idle in the plant for years to come. This arrangement will obviate the necessity of drawing from ordinary profits any portion of the money required for this additional plant. At a later date it may be found advisable to increase the capacity by a further 5,000 tons, and the new plant will be designed so as to admit of this increase being made at small expense should circumstances later on render it necessary. It is anticipated that this new plant should be in operation about April next. It will be seen at once that this addition will be almost equally desirable whether, as we now anticipate, the company finally acquires the Simmer and Jack East property, or whether eventually we exercise our option to transfer it to the Consolidated Gold Fields, in which case we should have to face the possibility that the Consolidated Gold Fields, or any person or company purchasing the property from them, might require that portion of the plant which has of late been leased by the Simmer and Jack East to Knights Deep.

Labour and Drills.

In formulating this policy your directors have naturally carefully considered the question whether the supply of native labour available is likely to prove sufficient to provide the tonnage contemplated, and in this connection have derived considerable encouragement from the success which is attending the increased use of small drills. Careful experiments, towards the cost of which the companies of the Consolidated Gold Fields group have contributed, have for some time past been in progress on your property, and though these experiments were to some extent interrupted by the disorganisation caused by the recent fire, it now seems reasonable to anticipate that by degrees the use of small drills will enable us to dispense with a very considerable amount of hand labour without any increase in working cost. You will see from the report of the acting superintending engineer that the ore fully developed in the mine at the 31st of July last was estimated at 1,477,414 payable milling tons of an average assay value of 4.7 dwts., in addition to which there were some 46,600 tons of partially developed ore of an estimated value of 4.3 dwts. per ton. The fact is, however, that the actual development work to be done is very small. We now know that we have very large bodies of ore of a low average grade but capable of being cheaply mined, and we believe the best results can and will be obtained by milling on a large scale with a plant reorganised on the most modern lines. It is impossible to lose sight of the fact that, being dependent on ore of such a low average grade, the margin for counterbalancing adverse circumstances to which mining must periodically be liable is necessarily very small; the effect, for example, of any temporary reduction of value being in proportion far more noticeable than in the case of a mine of higher grade, and the need is therefore all the greater for the most effective organisation and supervision and every effort is being and will be made to secure this. During the year under review the mine has again been in charge of Mr. G. A. Chalkley, and your directors have much pleasure in expressing their appreciation of the good work done by him and his staff. I now beg formally to move the adoption of the report and accounts.

The report and accounts were adopted.

Messrs. E. A. Wallers and D. Christopherson were re-elected as directors.

The auditors, Messrs. Thomas Douglas and Charles Stuart, were reappointed.

New Modderfontein G.M. Co.,

LIMITED.

(Incorporated in the Transvaal).

NOTICE TO SHAREHOLDERS.

NOTICE is hereby given that the FIFTEENTH ORDINARY GENERAL MEETING OF SHAREHOLDERS, for the year ended 30th June, 1912, will be held in the Board Room, the Corner House, Johannesburg, on WEDNESDAY, 6th November, 1912, at 11 a.m., for the following business—

1. To receive and consider the Balance Sheet and Accounts for the year ended 30th June 1912, and the Reports of the Directors and Auditors.
2. To elect two Directors in the place of Mr. C. S. Goldman, M.P., and Mr. R. W. Schumacher, who retire in accordance with the provisions of the Articles of Association, but are eligible and offer themselves for re-election.
3. To appoint Auditors in the place of Messrs. Deloitte, Plender, Griffiths, Annan & Co., and Mr. L. F. Melvill, who are eligible for re-appointment, and to fix their remuneration for the past audit.
4. To transact General Business.

The Share Transfer Books of the Company will be closed from the 6th November, 1912, to the 12th November, 1912, both days inclusive.

Holders of Share Warrants to Bearer who desire to be present or represented at the Meeting must deposit their Share Warrants (or may at their option produce same), at the places and within the times following—

(a) At the Head Office of the Company in Johannesburg, at least twenty-four hours before the time appointed for the holding of the Meeting;

(b) At the London Office of the Company, No. 1, London Wall Buildings, London, E.C., at least thirty days before the date appointed for the holding of the Meeting;

(c) At the Office of the Compagnie Française de Banque et de Mines, 20, Rue Taitbout, Paris, at least thirty days before the date appointed for the holding of the Meeting;

and must otherwise comply with the 'Conditions as to the issue of Share Warrants or Bearer Shares" now in force.

Upon such deposit or production a certificate, with proxy form, will be issued under which such Bearer Warrant holder may attend the Meeting either in person or by proxy.

By Order of the Board,

RAND MINES, LTD. (Secretaries).
S. C. STEIL, Joint Secretary.

Head Office: The Corner House,
Johannesburg, Transvaal,
14th September, 1912.

43179

NOURSE MINES, LIMITED.

REPORT OF THE DIRECTORS.

For the Year ended 31st July, 1912.

Submitted at the Sixteenth Annual Ordinary General Meeting of Shareholders, convened for Wednesday, 30th October, 1912, at 11 a.m., in the Board Room, The Corner House, Johannesburg.

To the Shareholders,

Nourse Mines, Limited.

Gentlemen,—Your Directors beg to submit their Sixteenth Annual Report and Audited Accounts for the year ended 31st July, 1912, which are accompanied by Reports of the Consulting Engineer and the Manager.

PROPERTY.

Arrangements have been made with the Government of the Union of South Africa for the acquisition of mineral rights under water-rights Nos. 2, 3, 6, 327, 370, portion of water-right No. 362, bewaarplaatsen Nos. 888, 1361, portions of 950/952, and machine stands Nos. 305/306 and 337, in extent 21·919 claims. The consideration payable is in the form of an annuity of £1,632 for fifteen (15) years, and the transaction is shown in the Balance Sheet now presented. A tender also has been made to Government for the mining rights under mining stand No. 37, in extent ·0426 claims.

The amount spent on Property Account represents a sum of £1,455 6s. 6d. paid to The Jumpers Gold Mining Company, Limited, in connection with the mining rights under water-rights Nos. 362 and 6.

ACCOUNTS.

The Working Expenditure and Revenue Account shows that a net profit was earned during the year of £243,200 9s. 6d., which has been dealt with in the Appropriation Account as follows :—

Amount unprovided for at 31st July, 1911, on account of Expenditure on Capital Account ...				£33,894	14 11
Expended during current Financial Year—					
Property Account	£1,455	6	6		
Development and Equipment ...	33,017	3	8		
Government of the Union of South Africa Annuity Account	1,632	0	0		
				36,104	10 2
				£69,999	5 1
Government Tax on Profits				20,604	2 0
Dividends Nos. 15 and 16				124,173	3 6
				£214,776	10 1
Balance of Appropriation Account carried forward				28,423	19 5
				£243,200	9 6

Details of the amount £33,017 3s. 8d. expended on Development and Equipment will be found in the Manager's Report submitted herewith.

The cost of unwatering and reconditioning the South Nourse shafts, etc., amounting to £12,446 3s. 6d., has been treated as Capital Expenditure.

The total amount spent on Development during the year was £76,813 6s. 5d., of which £68,978 15s. 0d. were charged out month by month against profits. A recalculation of the ore reserves at the end of the year disclosed a decrease of 81,705 tons, and it has therefore been decided to write off the balance of £7,834 11s. 5d. to Working Expenditure and Revenue Account. Reference is made to this feature in the Consulting Engineer's Report.

DIVIDENDS.

During the year Dividends No. 15 of ten per cent. (10%) and No. 16 of five per cent. (5%) have been declared, absorbing £124,173 3s. 0d.

DIRECTORS.

During the year Messrs. E. J. Renaud and A. G. Gill were appointed by the Directors to fill vacancies on the Board caused by the resignation of Mr. H. O'K. Webber and Mr. W. H. Dawe, which appointments you are now asked to confirm.

In terms of the Articles of Association all your Directors, namely, Messrs. H. C. Boyd, R. W. Schumacher, E. J. Renaud, Henry Nourse, S. C. Black, A. G. Gill, F. D. P. Chaplin, and W. T. Graham, retire from office, but are eligible and offer themselves for re-election.

AUDITORS.

You are requested to determine the remuneration of the Auditors for the past audit and to appoint Auditors for the ensuing year.

GENERAL.

Miners' Phthisis.—Legislation has been enacted which provides, as from 1st August, 1912, for the payment of compensation to persons suffering from phthisis contracted prior to the commencement of the Act, or during the first two years subsequent thereto. The necessary funds will be contributed by Government and by an assessment on mining companies. In addition, a Phthisis Insurance Fund has been provided for cases arising after the first two years; this is maintained by contributions jointly from employers and employees. The administration of both funds has been placed in the hands of a Board appointed by Government.

Power.—It is proposed to amend the terms of the contract entered into with the Rand Mines Power Supply Company, Limited. The new arrangement, if completed, will afford greater security of supply to your Company. The supply of power is not sufficient to meet our requirements, but it is anticipated that a further source will be available before the end of 1912.

ANNUAL MEETING.

It will have been observed from the circular covering the Notice convening the Sixteenth Ordinary General Meeting of Shareholders for 30th October, 1912, that, in order to give European Shareholders time for the perusal of the Annual Reports and Accounts, the Chairman will move that it be adjourned until 4th December, 1912, this course being the only one that can be adopted under the present Articles of Association. To obviate this in future years it is proposed to call Special Meetings of Shareholders in January or February next, when the opportunity will be taken to make the necessary amendments, and generally to bring the Articles up to date and into conformity with the present Company Law of the Transvaal.

H. C. BOYD, Chairman.
S. C. BLACK,
C. MEINTJES,
E. J. RENAUD,
J. H. RAINIER,
A. G. GILL,
F. LESLIE BROWN,
W. T. GRAHAM,
Directors.

RAND MINES, LIMITED.
Secretaries.
S. C. STEIL,
Joint Secretary.

Johannesburg, 26th September, 1912.

Nourse Mines, Limited—continued

CONSULTING ENGINEER'S REPORT.

The Chairman and Directors,

Nourse Mines, Limited.

Gentlemen,—The main features of the operations of your Company for the year ending 31st July, 1912, as compared with the previous year, are as follows :—

	Year ending 31st July, 1911.	Year ending 31st July, 1912.
Tons milled	643,675	609,250
Yield	29s. 1d.	30s. 6d.
Cost per ton milled	21s. 7d.	22s. 6d.
Profit	7s. 6d.	8s. 0d.
Profit from treatment of current ore	£241,024	£244,643
Profit from treatment of accumulations	£11,135	£8,590
Total working profit	£252,159	£253,233

It is seen that there is little difference between the profits for the last two years; the slight improvement in the return from current ore treatment being counteracted by the reduced profit from accumulations.

The tonnago milled, while averaging over 50,000 tons per month, shows a decrease of 34,425 tons as compared with the record tonnage crushed last year. The decrease in tonnage is chiefly attributable to somewhat unsatisfactory underground conditions in the earlier portion of the period under review, which have, however, been gradually remedied, and the results of the last few months represent a substantial improvement as compared with the early part of the year; thus, for the last quarter, the tonnage milled averaged 55,433 tons and the profit £25,125 per month, with working costs nearly 2s. per ton below the average for the preceding nine months of the year.

The yield, as compared with the previous year, showed an increase of 1s. 5d. per ton, owing to a fractional improvement in mine grade, closer sorting and a slight increase in extraction from metallurgical operations.

Development operations continue to be carried out on an extensive scale, the total ore developed for the year amounting to 917,765 tons, of which 693,893 tons, or 75·6 per cent. were estimated to be payable.

The payable ore reserves at 31st July, 1912, were estimated as follows :—

	Tons.	Value. Dwts.
Main Reef	628,700	5·4
Main Reef Leader	514,450	6·9
South Reef	825,850	7·2
Total and average	1,969,000	6·6

The above ore reserves may be classified as follows :—

	Tons.	Value Dwts.
(1) Ore fully blocked out for stoping	1,513,980	6·8
(2) Ore valued, which will be rendered available for stoping by current development	325,920	5·6
(3) Ore contained in shaft pillars, and therefore unavailable for stoping at present	129,100	6·8
Total and average	1,969,000	6·6

The above tonnages are based on stoping widths of 65 inches for the Main Reef, 46 inches for the Main Reef Leader, and 49 inches for the South Reef.

As compared with the previous year, the tonnage shows a decrease of 81,705 tons, while the value remains the same. This comparatively small decrease in tonnage is due to the fact that owing to the faulted nature of the mine it has been found in actual mining that certain areas, formerly included in the reserves, are cut off from the current workings by faults; these areas have therefore been temporarily excluded from the reserves, owing to the data available not being considered sufficient for the purpose of accurately valuing them. Virtually the ore reserves position remains the same as at the end of the previous financial year.

In addition to the above ore reserves there are developed 500,000 tons of ore of an average value of about 4·0 dwts. per ton —this including all blocks between 3·5 and 4·7 dwts., the latter being the present limit of profitable working. Any reduction in working costs will bring some of this ore into the sphere of profitable mining.

Practically all machinery for the electrification of the plant, except at the South Nourse, is now erected and complete, but a sufficiency of power from the Rand Mines Power Supply Company, Limited, has not been available, necessitating the use of both steam and electric power throughout the year, a procedure not conducive to economical working.

During the year underground connection was established between the Nourse Deep and No. 2 Shaft of the South Nourse, thereby permitting of more energetic development operations in the latter section with a view to effecting the connection with the West Incline, which is a necessary step in the policy decided upon for concentrating hoisting operations at the South Nourse No. 2 Shaft.

The native labour position was, on the whole, fairly satisfactory, and showed an improvement towards the close of the year. The prospects of the mine are good, and the continuance of the improved profits obtained during the last few months can reasonably be expected, provided the labour force is sufficient to maintain the present mill tonnage.

I beg to remain, Gentlemen,

Yours faithfully,

B. MADEW,

Consulting Engineer

Johannesburg,
5th September, 1912.

WORKING EXPENDITURE AND REVENUE ACCOUNT for the Year ending 31st July, 1912.

Dr.

To Mining Expenses—		
Mining	£440,427 2 8	
Developing	68,978 15 0	
	£509,405 17 8	
,, Reduction Expenses	122,370 18 1	
,, General Expenses—Mine	37,332 14 7	
,, General Expenses—Head Office—		
Salaries, agency fees and rent	£8,226 14 2	
Stationery, printing, advertising, postages and telegrams	936 17 2	
Directors' and Auditors' Fees	2,880 0 0	
Licences	4,760 10 0	
Sundry	752 15 8	
	17,556 17 0	
Less Discounts on goods purchased	2,388 0 2	
	15,168 16 10	
	£684,278 7 2	
,, Credit Balance on Working for the year carried down	244,643 4 8	
	£928,921 11 10	
To Donations—		
Sundry Donations	£822 0 2	
Miners' Phthisis—		
Contribution to Sanatorium Building, running expenses thereof, and Assessment under Miners' Phthisis Allowances Act, 1911	1,845 14 3	
	£2,667 14 5	
,, Development vide Directors' Report	7,834 11 5	
,, Interest and Exchange	2,387 11 7	
	£12,889 17 5	
,, Credit Balance carried to Appropriation Account	243,200 9 6	
	£256,090 6 11	

Cr.

By Gold Account	£928,921 11 10
	£928,921 11 10
By Balance brought down	£244,643 4 8
,, Profit on Treatment of Accumulated Slimes	8,589 15 4
,, Freehold Revenue	2,428 19 5
,, Sundry Revenue	128 7 7
	£256,090 6 11

Nourse Mines, Ltd.—continued.

BALANCE SHEET 31st JULY, 1912.

Dr. *Cr.*

To Capital Account—					
Authorised—850,000 shares of £1 each		£850,000	0	0	
Less—22,179 shares of £1 each in Reserve		22,179	0	0	
Issued— 827,821 shares of £1 each				£827,821	0	0
,, Funds Transferred from Appropriation Account—						
For expenditure on property, development and equipment in excess of working capital provided :—						
As per Balance Sheet, 31st July, 1911	£200,024	15	2			
For year ending 31st July, 1912	69,999	5	1			
				270,024	0	3
,, Government of the Union of South Africa "Annuity Account"—						
For total amount payable (in fifteen annual instalments of £1,632 each) as consideration for grant of mining rights under certain Water-rights, Bewaarplaatsen and Machine Stands (vide Contra)	24,480	0	0			
Less Annuity for year ending 31st July, 1912	1,632	0	0			
				22,848	0	0
				£1,120,693	0	3
,, Sundry Shareholders—						
Unpaid and unclaimed dividends	42,012	18	11			
,, Sundry Creditors—						
Loan Account	£2,783	16	7			
Wages, stores, etc.	37,055	5	2			
Government Tax on Profits	20,583	14	0			
	60,422	15	9			
				102,435	14	8
,, Balance of Appropriation Account—						
Unappropriated				28,423	19	5
NOTES.—There are further liabilities as under :—						
I.—On account of shares subscribed for in other Companies, viz. :—						
Co-operative Exchange Yard, Ltd. : £64 per share uncalled on 80 shares	£5,120	0	0			
Witwatersrand Native Labour Association, Ltd. : 8s. per share uncalled on 1,415 shares	566	0	0			
Witwatersrand Co-operative Smelting Works, Ltd. : 12s. per share uncalled on 1,368 shares	820	16	0			
	£6,506	16	0			
II.—For contracts open for the supply of additional equipment, etc.						
				£1,251,552	14	4

By Property, Development, and Equipment—					
As per Balance Sheet, 31st July, 1911				£1,061,740	10	1
Add—						
Net Expenditure during year—						
Property (vide Directors' Report)	£1,455	6	6			
Mining Rights under certain Water-rights, Bewaarplaatsen and Machine Stands, in extent 21.919 claims held under grant from the Government of the Union of South Africa (vide Contra)	24,480	0	0			
	25,935	6	6			
Development, as per Manager's Report	12,446	3	6			
Equipment, as per Manager's Report	20,571	0	2			
				58,952	10	2
				£1,120,693	0	3
,, Shares in Other Companies at cost—						
Co-operative Exchange Yard, Ltd. : 80 £80 shares, £16 per share paid	1,280	0	0			
Rand Mutual Assurance Co., Ltd. : 340 £10 shares, fully paid	3,400	0	0			
Witwatersrand Native Labour Association, Ltd. : 1,415 £1 shares, 12s. per share paid	849	0	0			
Witwatersrand Co-operative Smelting Works, Ltd. : 1,368 £1 shares, 8s. per share paid	547	4	0			
	6,076	4	0			
,, Stores and Materials—						
In stock	£16,259	13	3			
In transit	1,999	15	4			
	18,259	8	7			
,, Live Stock, Vehicles, etc.	972	10	0			
,, Office Furniture	493	5	0			
,, Bearer Share Warrants	129	18	4			
,, Plantations	542	15	9			
				20,397	17	8
,, Sundry Debtors and Payments in Advance				16,690	16	6
				43,164	18	2
,, Cash at Bankers	£2,376	11	11			
,, Gold Consignment Account	85,318	4	0			
				87,694	15	11
				130,859	14	1
				£1,251,552	14	4

APPROPRIATION ACCOUNT.

To Capital Expenditure—					
Profits appropriated during the year				£69,999	5	1
,, Government Tax—						
For the year ending 31st July, 1912, under the Mining Taxation Act, 1910				20,604	2	0
,, Dividend Account—						
Interim Dividend No. 15 of 10 per cent., declared 17th January, 1912	£82,782	2	0			
Interim Dividend No. 16 of 5 per cent., declared 16th July, 1912	41,391	1	0			
				124,173	3	0
,, Balance Unappropriated—						
Carried to Balance Sheet				28,423	19	5
				£243,200	9	6

By Balance of Working Expenditure and Revenue Account—					
For the year ending 31st July, 1912				£243,200	9	6
				£243,200	9	6

RAND MINES, LIMITED, Secretaries.
S. C. STEIL, Joint Secretary.

H. C. BOYD, Chairman.
S. C. BLACK, Director.

To the Shareholders,
NOURSE MINES, LIMITED.

We have examined the above Balance Sheet, with the Books, Accounts, and Vouchers of the Company. We beg to report that we have obtained all the information and explanations we have required, and in our opinion this Balance Sheet contains the particulars required by the Company's Articles of Association, and is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs, according to the best of our information and the explanations given to us and as shown by the books of the Company.

J. N. WEBB,
C. L. ANDERSSON & CO.,
Incorporated Accountants,
Auditors.

Johannesburg, 21st September, 1912.

THE ROOIBERG MINERALS DEVELOPMENT COMPANY, LIMITED.

(Incorporated in the Transvaal).

DIRECTORS' REPORT

For the Year ended 30th June, 1912.

Submitted at the Fourth Ordinary General Meeting of Shareholders held in the Board Room, National Bank Buildings, Simmonds Street, Johannesburg, on Wednesday, the 30th day of October, 1912, at 10 a.m.

Gentlemen,—Yonr Directors beg to submit their Report, together with audited Statements of Account for the year ended 30th June, 1912.

The Reports of the Consulting Engineer and Manager are also attached.

CAPITAL.

The Capital of the Company is £180,000, divided into 180,000 Shares of the nominal value of £1 each, all issued.

The options granted over 30,000 further shares expired on the 31st May, 1912, without being exercised.

PROPERTY.

The property of the Company consists of :—

(A) The freehold—including Mineral Rights—of the southern half of Olievenbosch, No. 939, District Rustenburg, this portion being in extent 971 morgen 141 square roods.

(B) The mineral rights of the adjoining farm Hartebeestefontein. No. 310, in extent 3,186 morgen 320 square roods.

(C) The surface rights of an undivided 29/32nds of the said farm Hartebeestefontein No. 310. Steps are being taken to have these rights divided.

OPERATIONS.

The following are the results of the year's operations :—

Old Mill of 10 Stamps ran 351.8 days.

New Mill of 10 Stamps ran 23.9 days.

Ore mined and sent to Crushers, 18,320 tons.

Ore taken from Dumps, 3,746 tons.

Waste sorted out (7 per cent.), 1,293 tons.

Ore Milled, 20,799 tons.

Concentrates produced, 789.8 long tons, of an overage grade of 67.89 per cent. metallic tin.

Concentrates in reserve at the end of the year, 17.33 long tons.

Ore Reserves on a milling basis at 30th June, including Ore at grass, 21,300 tons.

Average recovery value of Ore Reserves, 4.7 per cent. metallic tin.

In estimating the Ore Reserves, no allowance has been made for the supplementary fillings.

It is estimated that the gross value of accumulated slimes, middlings, etc., on hand, which will now gradually be treated in the new plant, was, at the 30th June, £125,632.

The new Reduction Plant was taken into commission in May, 1912.

The construction of the Water Storage Reservoir was completed before the rainy season set in, and given an average rainfall, an ample supply of water for the requirements of the Reduction Plant is now assured.

FINANCIAL.

The revenue from Tin Concentrates amounted to £105 617 4s. 6d., yielding a profit of £32,721 5s. 2d., while a further £526 5s 8d. was derived from interest on Fixed Deposits, making a total of £33,547 10s. 10d., which, together with £39,468 1 s 7d brought forward from last year, was dealt with as follows :—

Interim Dividends Nos. 2 and 3 of 7½ per cent. each	£27,000	0	0
Amount written off Shaft Sinking, Development and Exploration	20,465	3	9
Appropriated for Expenditure on Fixed Assets .	9,850	1	6
Directors' Remuneration	1,350	0	0
Government Tax	604	9	4
Carried forward	13,731	7	4
	£73,016	1	3

The nett expenditure on Capital Account for the year amounted to £66,634 13s. 5d., and at the end of the year the excess of cash assets over liabilities amounted to £13,731 7s. 4d.

It will be recollected that in the Report for the Quarter ended 30th June, 1912, a statement was made that, in future, Shaft Sinking, Development, and Exploration would be charged direct to Working Costs.

It is not considered desirable to carry any of these Accounts as Assets on the Balance Sheet, and the balances appearing last year under the headings "Development and Exploration" and "Shafts" have been written off through the Appropriation Account, while the whole of the expenditure for the year under review has been included, since the close of the year, in the Profit and Loss Account, which will thus reflect a lower working profit than was reported in the four Quarterly Reports.

DIVIDENDS.

You will be asked to confirm the action of the Directors in declaring Interim Dividends Nos. 2 and 3 of 7½ per cent each

DIRECTORS.

In terms of the Articles of Association, Mr. E. Friedlander retires from the Board, and, being eligible, offers himself for re-election.

AUDITOR.

You are asked to fix the remuneration of the retiring Auditor Messrs. Alex. Aiken & Carter, and to appoint an Auditor for the ensuing year.

WM. DALRYMPLE,
WM. McCALLUM,
G. W. HIGGINS,
JNO. ROY,
F ELKAN, Directors

Johannesburg, 6th September, 1912.

The Rooiberg Minerals Development Co., Ltd.—continued.

Dr. BALANCE SHEET, 30th June, 1912. *Cr.*

To Capital Account ... ... 180,000 Shares of £1 each.			£180,000 0 0
„ Premium on Shares ... ... (10s. per Share on 30,000 Shares.)			15,000 0 0
„ Funds Transferred from Appropriation Account ... Appropriated at 30th June, 1912.			9,865 1 0
			£204,865 1 0
„ Sundry Creditors			22,068 9 2
Shareholders for Dividend No. 3 ...	£13,500 0 0		
Unclaimed Dividends	28 4 5		
Amount due to Government in respect of Profit Tax	325 17 0		
On Open Account	8,214 7 9		
„ Concentrates Suspense Account			1,616 0 0
„ Appropriation Account ... ... Balance at 30th June, 1912.			13,731 7 4
NOTE.—There are further liabilities in respect of Shares in other Companies as under:—			
Witwatersrand Native Labour Association: 50 Shares, 8s. per Share uncalled	£20 0 0		
Kleinfontein Group Labour Organisation: 20s. per head on complement of 600 natives	600 0 0		
	£620 0 0		
			£242,280 17 6

By Property		£99,001 13 3
„ Mine Equipment		104,486 0 11
„ Live Stock and Vehicles		839 14 9
„ Furniture		537 12 1
		£204,865 1 0
„ Shares in Other Companies ... ... Witwatersrand Native Labour Association: 50 shares, 12s. per share paid, and 25s. per share deposit ...	£92 10 0	92 10 0
„ Sundry Debtors and Payments in Advance		1,089 15 4
„ Stores on Hand		4,550 17 2
„ Concentrates in Transit		10,502 7 2
„ Cash ... ... On Fixed Deposit with Accrued Interest, Current Account and in hand.		21,180 6 10
		£242,280 17 6

L. S. RAYMOND, Acting Secretary.

WM. DALRYMPLE, Chairman.
WM. McCALLUM, Director.

AUDITORS' REPORT.

To the Shareholders of
The Rooiberg Minerals Development Company, Limited.

We have audited the above Balance Sheet with the Books and Vouchers of the Company, for the year ended 30th June, 1912. We have obtained all the information and explanations we have required, and have to report that in our opinion the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the Company's affairs according to the best of our information and the explanations given us and as shown by the Books of the Company.

ALEX. AIKEN & CARTER, Auditors.

Johannesburg, 4th September, 1912.

Dr. PROFIT AND LOSS ACCOUNT for the Year ended 30th June, 1912. *Cr.*

To Mining			£11,688 2 1
„ Transport, Sorting and Crushing ...			4,054 11 5
„ Milling and Concentrating ...			10,037 16 1
„ Drying and Bagging			2,309 17 8
„ General Expenditure—Mine ...			8,548 14 7
„ Development and Exploration ...			16,970 15 10
„ Shafts			3,578 5 1
„ General Charges—Head and London Offices ...			3,940 2 9
„ Realisation Charges			11,767 13 10
Transport, Railage, Freight, Insurance, and Returning Charges, etc.			
„ Balance carried down			32,721 5 2
			£105,617 4 6
To Government Tax			£604 9 4
Amount of Tax on Profits for year	£325 17 0		
Amount under-estimated for 1911	278 12 4		
„ Directors' Remuneration			1,350 0 0
„ Balance to Appropriation Account ...			31,593 1 6
			£33,547 10 10

By Concentrates Account		£105,617 4 6
		£105,617 4 6
By Balance brought down ...		£32,721 5 2
„ Interest on Fixed Deposits		826 5 8
		£33,547 10 10

Dr. APPROPRIATION ACCOUNT. *Cr.*

To Dividend No. 2 of 7½ per cent.		£13,500 0 0
„ Dividend No. 3 of 7½ per cent.		13,500 0 0
„ Development and Exploration (written off) ...		12,251 10 4
„ Shafts (written off)		8,213 13 5
„ Amount Appropriated for Expenditure on Fixed Assets		9,865 1 0
„ Balance to Balance Sheet		13,731 7 4
		£71,061 12 1

By Balance, 30th June, 1911		£39,468 10 7
„ Balance Profit and Loss Account		31,593 1 6
		£71,061 12 1

L. S. RAYMOND, Acting Secretary.

WM. DALRYMPLE, Chairman.
WM. McCALLUM, Director.

Examined and found correct,
ALEX. AIKEN & CARTER, Auditors.

Johannesburg, 4th September, 1912.

THE "S. A. MINING JOURNAL"

Mining Machinery and Material Directory

and List of Professional Men (Engineers, Assayers, etc., practising in various parts of South Africa, Shipping and Forwarding Agents, Company Notices and Reports, and Miscellaneous Advertisements.

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